

# Silk Economics and Cross-Cultural Artistic Interaction: Byzantium, the Muslim World, and the Christian West

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The investigation of extant medieval silks is the domain of textile and art historians, who attempt to establish their distinctive features, origin, and approximate dating and to classify them within broad categories. These issues generally determine the extent to which these scholars are concerned with the production and diffusion of silks and the artistic interaction between silk manufacturing centers. However, the exploration of this last process is severely hampered, if not distorted, by three factors. First, on the whole, research on medieval silks has always been restricted to a highly selective body of material, visual and written evidence bearing on luxury fabrics, which fails to reflect the broad qualitative spectrum of silk fabrics and the wide social framework within which they circulated. Second, the focus on individual silks, especially precious museum pieces, too often obscures the fact that the nature of textiles did not exclusively respond to individual demands. Rather, since silks, like other goods, were part of a material culture of specific societies in certain periods, their features were largely shaped by a set of social, economic, cultural, and aesthetic variables within each of these societies at large. Finally, most scholars dealing with medieval silks sorely neglect, if not entirely overlook, the economics of silk.<sup>1</sup> This is particularly obvious with respect to those dealing with artistic interaction. In short, in order to gain an insight into that process, a shift in perspective and a more comprehensive approach than the one adopted so far are indispensable.

One further point deserves to be stressed in this connection. In silk manufacture, a series of activities requiring a high level of technical expertise, artistic and technological interaction were often closely interrelated. Indeed, the structure and operation of the loom not only determined the weaving technique, but also the nature and degree of pattern complexity and the stylistic effects obtained in the fabric. In addition, color schemes and effects depended upon the application of dyeing techniques specific to the nature of the threads and to each of the colorants or the batch of ingredients used.

<sup>1</sup> Silk economics in the Muslim world have not been investigated so far and have hardly drawn any attention with respect to Byzantium. On the other hand, abundant written sources have encouraged the exploration of various aspects of silk economics in the Christian West, especially in Italy. I do not dwell here on individual prices and comparative price series, which belong to the study of silk economics, although some figures are provided in the discussion of certain topics.

The first section of this study deals with the evidence bearing on medieval silk textiles, their uses, raw materials entering into their manufacture, and the qualitative range of the textiles. The second section dwells upon the workforce engaged in the production of silks, workshops and manufacture, supply and demand, consumption and diffusion. In addition it examines the impact of these factors upon the avenues, nature, range, and economics of cross-cultural artistic interaction, several instances of which are examined. This investigation reveals multiple features common to and close connections between developments in Byzantium, the Muslim world, and the Christian West in the period extending from the tenth to the mid-fourteenth century, upon which this study focuses. It is essential, therefore, to consider these regions jointly within the broad Mediterranean framework within which they interacted, although necessarily other regions are also taken into account.<sup>2</sup>

The Roman Empire and early Byzantium imported silk fabrics from inner Asia, yet also manufactured them with imported silk from that region.<sup>3</sup> It follows that the industrial infrastructure and the skilled workforce required for the weaving of silk textiles already existed in Byzantium before the reign of Justinian I (527–565). It is during that reign, according to two sixth-century historians, Procopius of Caesarea and Theophanes of Byzantium, that two monks circumvented Sasanian Persia, the main intermediary in the empire's supply with silk, secretly introduced silk moth eggs into Byzantium, and thereby enabled the launching of sericulture, the growing of the domesticated silkworm feeding on mulberry leaves (*Bombyx mori* L.).<sup>4</sup> These colorful accounts are rather simplistic and questionable.<sup>5</sup> In any event, it is clear that sericulture was gradually extended in Byzantium in the following period, yet its expansion did not keep pace with the growing domestic demand for silk textiles. As a result Byzantine manufacturers remained partly dependent upon the import of foreign silk for an unknown period of time, as attested by imperial legislation and other sources.<sup>6</sup> By the early tenth century, however, the empire

<sup>2</sup> In order to shorten the notes, only studies directly relevant to the issues examined in this paper are mentioned below, preferably recent ones containing references to earlier work. These issues will be further examined in a book devoted to the production and trade of silk and silk textiles in and around the medieval Mediterranean, on which I am currently working.

<sup>3</sup> These topics are outside the chronological range of the present study. It should be noted, however, that even recent publications still contend that some Roman silk fabrics were woven of thread unwound from foreign silk textiles, a reading of the sources convincingly dismissed long ago by M.-Th. Schmitter, "Subsericae vestes," *RA* ser. 6, 9 (1937): 205–7. The unwinding is also unlikely for practical and economic reasons, since the fabrics obtained from them would be of poor quality: see F. Crippa, "Dal baco al filo," in L. Molà, R. C. Mueller, and C. Zanier, eds., *La seta in Italia dal Medioevo al Seicento. Dal baco al drappo* (Venice, 2000), 9–10.

<sup>4</sup> Procopius, *De Bello Gothico* 4.17, in *Procopii Caesariensis Opera Omnia*, ed. J. Haury, rev. G. Wirth, 3 vols. (Leipzig, 1962–64), 2:576–77; Theophanes of Byzantium in K. Müller, ed., *Fragmenta Historicorum Graecorum*, 5 vols. (Paris, 1841–83), 4:270, §3. Information on moriculture, the growing of the mulberry tree, and on sericulture is provided by all major encyclopaedias. Medieval silk yields around the Mediterranean are the subject of much debate, yet are not our concern here.

<sup>5</sup> See comments by A. Muthesius, "The Byzantine Silk Industry: Lopez and Beyond," *JMedHist* 19 (1993): 19–23, repr. in eadem, *Studies in Byzantine and Islamic Silk Weaving* (London, 1995), 270–74. The question requires further discussion.

<sup>6</sup> N. Oikonomidès, "Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of the Kommerkiarioi," *DOP* 40 (1986): 33–51, assumes that from ca. 650 to ca. 800 the dated seals of the *kommerkiarioi* point to silk cultivation and trade in the specific regions in which these officers exercised their functions. I do not share that interpretation: see D. Jacoby, "Silk in Western Byzantium before the Fourth Crusade," *BZ* 84–85 (1991–92): 453–54, repr. in idem, *Trade, Commodities and Shipping in the Medieval Mediterranean*

had become self-sufficient in silk.<sup>7</sup> Silk textiles had acquired great importance in the life of the imperial court and the Church and as markers of social status even before the reign of Justinian I. They later served as an important tool of imperial diplomacy,<sup>8</sup> were among the prized artistic products contributing to the prestige of Byzantium abroad, and became an increasingly weighty factor in the latter's economy until the early thirteenth century.

The empire ceased to be the sole producer of silk and silk textiles around the Mediterranean after the loss of its eastern provinces in the seventh century. The Arabs extended moriculture, sericulture, and the manufacturing of silks from the Middle East to other regions under their rule, yet the early phase of that process is poorly documented. Arab settlers from Syria introduced moriculture and sericulture into al-Andalus after 740, as implied by an Arab author of the thirteenth century who refers to the Syrian mulberry tree growing in that region.<sup>9</sup> However, there is no evidence regarding the manufacture of silks in al-Andalus until the reign of the Umayyad 'Abd al-Raḥmān II (821–852), when a *tirāz* or weaving workshop attached to the ruler's court was established in Cordova.<sup>10</sup> "Spanish" veils were granted to several Roman churches by two popes, Gregory IV (827–844) and Leo IV (847–855). Since these light fabrics are mentioned among silk textiles, they too were presumably made of silk. Some of them were interwoven or embroidered with threads of precious metal, as illustrated by written evidence and extant veils of a later period.<sup>11</sup>

(Aldershot, 1997), no. 7. On the novella *Peri metaxes* and its dating, see Oikonomidēs, "Silk Trade and Production," 34–35.

<sup>7</sup> C. Zanier, "Un protettore scomodo. San Giobbe e la seta," in Molà et al., *La seta in Italia* (as above, note 3), 188–89, rightly argues that the production of fabrics in Mediterranean silk centers does not necessarily imply the contemporary practice of sericulture in the regions in which they were situated. However, one must reject his claim that until the mid-10th century the expansion of sericulture yielding high-quality silk thread was limited to small areas around the Mediterranean, since there are no sources attesting it until then. If this line of argumentation were correct, one should also take into account the absence of sources attesting the import of silk into the Mediterranean region in the 9th and 10th centuries. How, then, could we explain the fairly large production of high-grade silks in 10th-century Constantinople, some of which were exported to Muslim countries and others to the Christian West? I shall return elsewhere to this problem.

<sup>8</sup> A. Muthesius, "The Impact of the Mediterranean Silk Trade on Western Europe before 1200 A.D.," in *Textile in Trade*, Proceedings of the Second Biennial Symposium of the Textile Society of America (Washington, D.C., 1990), 126, 130, repr. in eadem, *Studies*, 135, 141–42, contends that Byzantium, "in return for silks, demanded Western military and naval aid"; see also eadem, "Silk, Power and Diplomacy in Byzantium," in *Textiles in Daily Life*, Proceedings of the Third Biennial Symposium of the Textile Society of America (Seattle, 1992), repr. in eadem, *Studies*, 231–44. The citation mentioned above is clearly an overstatement and a gross misunderstanding of the role of silk gifts in diplomatic transactions, also found in the second study. On such gifts, see below.

<sup>9</sup> On the introduction and extension of sericulture in al-Andalus, see M. Lombard, *Les textiles dans le monde musulman du VIIe au XIIe siècles* (Paris, 1978), 95–96; V. Lagardère, "Mûrier et culture de la soie en Andalus au Moyen-Age (Xe–XIVe siècles)," *Mélanges de la Casa Velásquez* 26.1 (1990): 97–106; idem, "Le ver à soie en Andalus à l'époque musulmane (VIIIe–XVe siècles)," in R. Durand, ed., *L'homme et l'animal domestique et l'environnement du Moyen Age au XVIIIe siècle* (Nantes, 1993), 343–49.

<sup>10</sup> See R. B. Serjeant, *Islamic Textiles. Material for a History up to the Mongol Conquest* (Beirut, 1972), 165–67. *Tirāz* was the term used in the Muslim world for bands displaying official honorific inscriptions woven into or embroidered onto a cloth. By extension it was also applied to the textiles manufactured in the workshops attached to the rulers' courts or supervised by them, as well as to the workshops themselves: *EI*<sup>2</sup>, 10:534–38, s.v. "Tirāz," by Y. K. Stillman and P. Sanders; Serjeant, *Islamic Textiles*, 7–27, and passim; P. L. Baker, *Islamic Textiles* (London, 1995), 53–62. On the workshops and the evolution of *tirāz* inscriptions, see also below, pp. 215–17.

<sup>11</sup> The "Spanish" veils are recorded in L. Duchesne, ed., *Le Liber Pontificalis: Texte, introduction et commentaire*, 2d ed., 3 vols. (Paris, 1955–57), 2:75 (note "vela cum argento spanisca XIII"), 107, 122, 128. A few later rectangular veils of silk of various provenances have been preserved in Spain, France, and Germany: latest treat-

It is impossible to date the early phases of sericulture and silk weaving in Muslim North Africa. A silk fabric bearing an embroidered inscription mentioning the name of the Umayyad caliph Marwān and the *ṭirāz* workshop of Ifrīqiya is generally ascribed to the time of Marwān II (744–49). It is not clear whether the cloth was produced in the workshop, the location of which is unknown.<sup>12</sup> However, the earliest evidence regarding sericulture in Ifrīqiya appears more than a century later. Ibn Ḥawqal, who wrote his geographical treatise in the last quarter of the tenth century, mentions the growing of silk around Gabes, Tunisia.<sup>13</sup> Two *fatwās* or legal opinions offered by muftis issued before 996 in Qayrawān, one regarding mulberry trees and their leaves and the other the sale of silkworms, confirm the practice of sericulture in Tunisia by that time.<sup>14</sup> Further testimonies appear in later Arabic sources, while a Jewish document of the 1060s or 1070s from the Geniza specifically refers to the export of Gabes silk.<sup>15</sup> The cloth called *qābisī*, attested between 1045 and 1057 in another Geniza document, was clearly a silk fabric originating in Gabes (Ar. Qābis).<sup>16</sup> However, in the course of the following century the manufacturing of silks ceased in that city, according to the Arab geographer al-Idrīsī, who compiled his *Kitāb Rudjār* or “Book of Roger” in Palermo between 1139 and 1154.<sup>17</sup>

Sericulture was apparently introduced into Sicily from Ifrīqiya after 827, when the island’s conquest by the Aghlabids of Qayrawān began, yet is documented neither in the ninth nor in the tenth century.<sup>18</sup> Later Jewish commercial letters, from the 1030s onward, attest that raw silk and silk textiles, all of which bear Arabic names, were being produced

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ment by S. Desrosiers in *Trésors de la Cathédrale de Chartres*, catalogue of the Musée des Beaux-Arts de Chartres (Chartres, 2002), 54–56.

<sup>12</sup> See F. E. Day, “The Ṭirāz Silk of Marwān,” in G. Miles, ed., *Archaeologica Orientalia in Memoriam Ernst Herzfeld* (Locust Valley, N.Y., 1952), 39–62. Day points to the existence of an imperial silk-weaving workshop in Carthage in the 4th century, thus before the alleged introduction of sericulture into the Byzantine Empire, and raises the problem of the thread’s origin: *ibid.*, 58. It is highly unlikely that the manufacture of silks continued after the 4th century through the Vandal and second Byzantine period (respectively the years 439–533 and 533–698). Incidentally, a hagiographic source refers to the import of silken garments produced in Constantinople to Carthage in 632: see D. Jacoby, “The Jews and the Silk Industry of Constantinople,” 2–3, in *idem*, *Byzantium, Latin Romania and the Mediterranean* (Aldershot, 2001), no. 11 (first publication). Evidence on the existence of a *ṭirāz* or court workshop in Ifrīqiya in 942/43 is adduced below, pp. 203–4.

<sup>13</sup> Ibn Hauqal, *Kitāb ṣūrat al-arḍ*, 2d ed. J. H. Kramers (Leiden, 1938–39), 71; Ibn Hauqal, *Configuration de la terre* (*Kitāb ṣūrat al-arḍ*), trans. J. H. Kramers, rev. G. Wiet, 2 vols. (Beirut–Paris, 1964), 1:66. The second version of that work was composed around 988: see *ibid.*, Introduction, XIII.

<sup>14</sup> See Lagardère, “Le ver à soie en Andalus,” 101, 103–4.

<sup>15</sup> Serjeant, *Islamic Textiles*, 180–81; S. D. Goitein, *A Mediterranean Society. The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, 5 vols. (Berkeley–Los Angeles, 1967–93), 4:168 and 402 n. 129. The export of silk from Tunisia, without mention of its specific origin, is already attested somewhat earlier by the document mentioned in the next note. The Geniza was a storeroom attached to a synagogue of Fuṣṭāṭ or Old Cairo, discovered in the late 19th century, which served as repository of discarded Jewish writings. It contained thousands of documents, of which only a small portion has been published or translated so far: see Goitein, *A Mediterranean Society*, 1:1–28. Goitein’s monumental book is the most important work exploiting these documents.

<sup>16</sup> M. Ben Sasson, ed., *Yehudei Siṣilia 825–1068. Te’udoth u-mekoroth* [= The Jews of Sicily 825–1068. Documents and Sources], *Oriens Judaicus*, ser. 1 (Jerusalem, 1991), 488–89, no. 101, line A24 (silk), A25 (cloth), in *Judaeo-Arabic*, with Hebrew trans., 493.

<sup>17</sup> *La géographie d’Edrisi*, trans. P.-A. Jaubert, 2 vols. (Paris, 1836–40), 1:255.

<sup>18</sup> The slow, progressive Muslim conquest of Sicily, which proceeded from west to east, ended only in 902: see M. Talbi, *L’émirat aghlabide, 184–296/800–909. Histoire politique* (Paris, 1966), 403–536. For lack of evidence it is impossible to reconstruct the pace at which sericulture spread within the island. See next note.



in Sicily and partly exported.<sup>19</sup> One of these documents, originally written in 1032, refers to a piece of *dībāj*, an all-silk, figured and glossy cloth, which in all likelihood had been manufactured in the island.<sup>20</sup> An Arabic tomb inscription found in Sicily records the name of a *dībāj* weaver who died in 1072.<sup>21</sup>

The rise of silk manufacturing in several cities of central and northern Italy from around the mid-twelfth century onward was unrelated to the Arabs. Its development also differed from that found in the regions of the western Mediterranean under Muslim rule. Indeed, until the late Middle Ages Italian silk centers relied almost exclusively on the maritime import of raw materials from the eastern Mediterranean, since the silk produced in Italy, except for the southern part of the peninsula, was not suitable for the manufacture of medium- and high-grade fabrics, nor were yields sufficient for a continuous production.<sup>22</sup>

Our knowledge of medieval silks has been enriched in the last sixty years or so by the discovery of numerous unknown pieces. The attribution, dating, and classification of extant fabrics has proceeded, thanks to a more refined visual analysis of individual motifs and patterns, their combination, their spatial organization and color schemes, thanks also to stylistic comparisons and a broader confrontation with iconographic material in other artistic media and with written sources, many of which had previously remained untapped.<sup>23</sup> It should be noted, however, that while these sources apply a generic term to each category of silks, their exploitation is often limited by incomplete evidence or the total lack of indications regarding the technical aspects of weaves, the nature of decoration, or the origin of the textiles. Muslim geographers and historians frequently refer to silk types and to the centers manufacturing them, yet since the textiles were familiar to their potential readers or audiences, they rarely provide details about them. Moreover, in the

<sup>19</sup> See D. Jacoby, "Seide und seidene Textilien im arabischen und normannischen Sizilien: der wirtschaftliche Kontext," in W. Seipel, ed., *Nobiles Officinae. Die königlichen Hofwerkstätten zu Palermo zur Zeit der Normannen und Staufer im 12. und 13. Jahrhundert*, exhibition catalogue of the Kunsthistorisches Museum, Vienna (Milan, 2004), 61–63.

<sup>20</sup> Ben Sasson, *Yehudei Siṣīliyah*, 178–81, no. 43, line A/8; this document is a copy of the original one. Serjeant, *Islamic Textiles*, 41 note 9, 72, and passim, mistakenly considered *dībāj* a silk brocade, an interpretation still common in most recent studies, although it had been dismissed more than a half century ago. On the nature of the cloth, see R. Pfister, "Le rôle de l'Iran dans les textiles d'Antinoé," *AI* 13–14 (1948–49): 65 note 107, and Lombard, *Les textiles dans le monde musulman*, 241.

<sup>21</sup> J. Johns in Seipel, ed., *Nobiles Officinae*, 292–94, no. 80.

<sup>22</sup> See D. Jacoby, "Silk Crosses the Mediterranean," in G. Airal di, ed., *Le vie del Mediterraneo. Idee, uomini, oggetti (secoli XI–XVI)*, Università degli studi di Genova, Collana dell'Istituto di storia del medioevo e della espansione europea 1 (Genoa, 1997), 70–79, repr. with corrections in Jacoby, *Byzantium, Latin Romania and the Mediterranean*, no. 10 (note also the Addenda and corrigenda to that study at the end of the volume); D. Jacoby, "Genoa, Silk Trade and Silk Manufacture in the Mediterranean region (c. 1100–1300)," in A. R. Calderoni Masetti, C. Di Fabio, and M. Marcenaro, eds., *Tessuti, oreficerie, miniature in Liguria, XIII–XV secolo*, Istituto Internazionale di Studi Liguri, Atti dei Convegni 3 (Bordighera, 1999), 16–18, 22–29; D. Jacoby, "Dalla materia prima ai drappi tra Bisanzio, il Levante e Venezia: La prima fase dell'industria serica veneziana," in Molà et al., *La seta in Italia* (as above, note 3), 270–75.

<sup>23</sup> See S. Desrosiers, "Les soieries comme source historique (Europe, XIIIe–XXe s.)," in S. Cavaciocchi, ed., *La seta in Europa secc. XIII–XX*, Istituto Internazionale di Storia Economica "F. Datini," Prato, Pubblicazioni—Serie 2, Atti delle "Settimane di Studio" e altri Convegni 24 (Florence, 1993), 487–506. On iconographic material, see, e.g., B. Klesse, *Seidenstoffe in der italienischen Malerei des 14. Jahrhunderts* (Bern, 1967); G. Cornu, "Sources iconographiques pour l'étude des tissus et costumes islamiques du IXe au XIIIe siècle," in *Islamische Textilkunst des Mittelalters: Aktuelle Probleme*, Riggisberger Berichte 5 (Riggisberg, 1997), 53–63; G. Cornu and M. Martiniani-Reber, "Étoffes et vêtements dans le ménologe de Basile II. Reflets des courants d'échanges entre Byzance et le monde islamique," *Quaderni di Studi Arabi* 15 (1997): 45–64.

Muslim world many geographic names pointing to the origin of specific silk textiles became over time generic terms defining cloth types manufactured in several places.<sup>24</sup> Only seldom is it possible, therefore, to establish a direct correlation between silks mentioned in written sources and extant pieces.

Important progress in the attribution and approximate dating of such silks has been particularly achieved by a more sophisticated technical and scientific analysis of weaves, textile fibers, gold and silver threads used in weaving and embroidery, in addition to colorants, as well as by the establishment of a more rigorous terminology resulting therefrom. However, scientific methods too have their limitations and do not always provide clear-cut answers, especially with respect to colorants and metal threads.<sup>25</sup> Moreover, in the absence of safe and commonly accepted criteria, the provenance and dating of numerous pieces remain rather vague. Thus, for instance, silks considered “Byzantine” and dated to the period covered by this study are ascribed either to Constantinople or to the empire in general, yet so far none has been securely attributed to specific provincial workshops such as those of Thebes, one of the most important Byzantine silk centers of the eleventh and twelfth centuries.<sup>26</sup> Many silks have given rise to lively debates, as illustrated by some examples adduced below.

In some cases woven or embroidered inscriptions appearing on silks provide some evidence regarding the latter's origin and approximate date of manufacture. Only a few inscribed Byzantine silks have survived. Some of them bear names that seem to be those of the owner or master of the workshop in which they were manufactured, yet there is no agreement about their dating within a period extending from the early sixth to the late eighth century. A few other silks display the woven names of emperors or those of high officials connected with silk manufacture or storage in Constantinople. They can be dated within a range of five to fifty years from the ninth to the early eleventh century.<sup>27</sup> A tablet-woven silk band bearing a laudatory inscription mentioning the name and function of a *protospatharios*, a high-ranking military officer, has been found in the northern Caucasus region in an eighth-century archaeological context.<sup>28</sup> Two later Byzantine silks have em-

<sup>24</sup> Serjeant, *Islamic Textiles*, has collected a large amount of evidence for the period extending to the mid-13th century, yet his work is not exhaustive.

<sup>25</sup> On problems related to colorants, see A. Muthesius, *Byzantine Silk Weaving AD 400 to AD 1200*, ed. E. Kisslinger and J. Koder (Vienna, 1997), 28–31; D. Cardon, ed., *Teintures précieuses de la Méditerranée. Pourpre-kermès-pastel* (Carcassonne, 1999), 24, 26–28, 34–36, where the author remarks that the plants from which indigoid colors were extracted cannot always be identified. The laboratory analysis of a silk dress which had lost its color, found at Mistra, Greece, failed to yield any result with respect to the colorant used: see M. Martiniani-Reber, ed., *Parure d'une princesse byzantine. Tissus archéologiques de Sainte-Sophie de Mistra* (Geneva, 2000), 85. On weaves, see this same collective work. On the numerous types of gold and silver threads, see M. Járó, “Goldfäden in der sizilischen (nachmaligen) Krönungsgewändern der Könige und Kaiser des Heiligen Römischen Reiches und im sogenannten Häubchen König Stephans von Ungarn—Ergebnisse wissenschaftlicher Untersuchungen,” in Seipel, *Nobiles Officinae*, 311–15.

<sup>26</sup> E. Weigand, “Die helladisch-byzantinische Seidenweberei,” in *Εἰς μνήμην Σπυρίδωνος Λάμπρου* (Athens, 1935), 503–14, is the only study ascribing silks to Thebes, yet it is limited in scope, outdated, and unconvincing; see Jacoby, “Silk in Western Byzantium,” 465.

<sup>27</sup> On all these Byzantine inscribed silks, see Oikonomidès, “Silk Trade and Production,” 51 and n. 108. More extensively, on the fairly well datable pieces, see Muthesius, *Byzantine Silk Weaving*, 34–43. H. Granger-Taylor, in D. Buckton, ed., *Byzantium. Treasures of Byzantine Art and Culture from British Collections* (London, 1994), 126–28, ascribes a silk from the tomb of St. Cuthbert with a woven, largely destroyed inscription to the first half of the 9th century.

<sup>28</sup> No other similar piece is known so far: see A. Jeroussalimskaia, “Un chef militaire byzantin dans le Caucase du Nord? Le ruban en soie de Moscevaja Balka,” in *Αιθόσπρωτον. Studien zur byzantinischen Kunst und*

broidered inscriptions that may be ascribed to ca. 1200 and to the first years of the fifteenth century, respectively.<sup>29</sup> Another Byzantine inscribed silk, sent by Emperor Michael VIII to Pope Gregory X, is known only from its description in the inventory of the papal treasury compiled in 1295. Its embroidery depicted the pope presenting the emperor to St. Peter, accompanied by Greek and Latin inscriptions.<sup>30</sup> It can thus be dated to the years immediately following the Union of the Churches, proclaimed in 1274 at the Second Council of Lyons. The piece was most likely delivered by George Metochites who, acting as ambassador of Emperor Michael VIII Palaiologos, met Gregory X in southern France in the summer of 1276 and proposed to him a joint Byzantine-Latin reconquest of Asia Minor.<sup>31</sup>

Numerous Islamic silk pieces adorned with *ṭirāz* bands have survived. Some of their inscriptions mention the name of the ruler or official who had ordered the manufacture of these fabrics, as well as the location of the workshop and the year in which they were produced, while others bear the name of the atelier's master. Names occasionally offer chronological clues for undated pieces.<sup>32</sup> Only a few western inscribed silks providing such indications are known. One of them is an extant piece apparently commissioned in Venice by Bishop Heinrich von Rotteneck (1277–1293) for his cathedral at Regensburg.<sup>33</sup>

A fairly large number of medieval silks owe their survival to their use in the Christian West as ecclesiastical vestments or furnishings, reliquary wrappings, or burial shrouds. Other pieces have been excavated at various European and Asian sites. The historical or controlled archaeological context from which fabrics were retrieved occasionally provides a *terminus ad quem* for their last use at the site at which they have been preserved and discovered. This approximate dating can be refined in some cases with the help of circumstantial evidence offered by written sources and the portrayal of silks in various artistic media, provided these depictions are not stylized or conventional and do not reproduce earlier models, in which case they are anachronistic. However, it should be stressed that in most cases neither visual nor circumstantial evidence regarding the last use of silks, nor for that matter the material context in which they were found, enable us to determine when they were manufactured, since a long time may have elapsed between production and arrival at final destination. This is well illustrated by an embroidered *ṭirāz* silk bearing the date A.H. 320, or A.D. 932, discovered at Fuṣṭāṭ or Old Cairo in a grave ascribed by its excavators to the 980s or the following two decades, thus between fifty to seventy years later. When found the fabric was still in excellent condition and retained its original sheen, which reveals that it had been well stored over a long period before being buried.<sup>34</sup>

*Geschichte. Festschrift für Marcell Restle* (Stuttgart, 2000), 125–29, who supposes that the band was sewn onto a garment after being granted by the emperor. The latter assumption requires further consideration.

<sup>29</sup> See A. Guillou, "Inscriptions byzantines d'Italie sur tissu," in I. Ševčenko and I. Hutter, eds., *AETOS. Studies in Honour of Cyril Mango* (Stuttgart–Leipzig, 1998), 172–76.

<sup>30</sup> E. Molinier, ed., "Inventaire du trésor du Saint Siège sous Boniface VIII (1295)," *BEC* 46 (1885): 18–19, no. 811.

<sup>31</sup> On that mission, see D. J. Geanakoplos, *Emperor Michael Palaeologus and the West, 1258–1282: A Study in Byzantine-Latin Relations* (Cambridge, Mass., 1959), 286–87. Since the silk reflects the agreement of 1274, it cannot have been prepared before the council and presented during its sessions, as contended by P. Johnstone, *The Byzantine Tradition in Church Embroidery* (London, 1976), 76–77.

<sup>32</sup> See an example above, note 12.

<sup>33</sup> It bears the inscription EPISCOPUS HEINRICVS: see D. King, "Some Unrecognised Venetian Woven Fabrics," *Victoria and Albert Museum Yearbook* 1 (1969): 56–58.

<sup>34</sup> On the silk and the dating of the funerary site, see R.-P. Gayraud et al., "Istabl 'Antar (Fostat) 1994: Rapport de fouilles," *Annales islamologiques* 29 (1995): 8 and 19, fig. 17.

Another case in point regards twenty-one bags containing high-grade *dībāj* and silk interwoven with gold textiles bearing the date A.H. 331 or A.D. 942/3, which were found some sixty years later, in A.H. 391 or A.D. 1000/1001, in a storehouse of the Fāṭimid caliph al-Ḥakīm in Cairo while preparations were under way for the reception of a Byzantine ambassador. The Arab historian Maqrīzī reports in his survey of the Fāṭimid period that these silks had been woven by slaves, clearly in a *ṭirāz* or court workshop, and were among the treasury items transferred in 973 from Qayrawān to Cairo when al-Muʿizz established himself in his new capital, four years after conquering Egypt.<sup>35</sup> Various extant Byzantine silks preserved in the Christian West also display similar chronological gaps between their approximate date of manufacture and the date at which they arrived or were buried in that region.

Our knowledge about the nature, manufacture, diffusion, and uses of medieval silks largely derives from written sources, whether originating in Byzantium, the Muslim world, the Christian West, or in Jewish communities around the Mediterranean. Much of this evidence appears in chronicles and literary works focusing on the deeds of rulers and social élites, whose luxurious lifestyle also manifested itself in costly and prestige-linked silks. Visual sources too—mosaics, paintings, miniatures adorning manuscripts, as well as portable artifacts—generally depict such pieces.<sup>36</sup> Moreover, extant silk fabrics mostly belong to these same categories of high-grade products. Silk fabrics and vestments in Christian liturgical uses, noted earlier, were on the whole better preserved and less affected by wear and tear than those in private use.<sup>37</sup> In addition, they were reshaped from time to time to conform with new fashions.<sup>38</sup> The same occurred with worn-out vestments made of luxury fabrics, especially silk and gold or silk and silver textiles, woven of silk intertwined respectively with gold or silver threads. Rather than being discarded, their good parts were remodeled to serve another purpose. This is explicitly stated by a chronicler describing gifts offered in 1109 by Wiprecht of Groitzch to the Benedictine abbey of Pegau, in the region of Leipzig. A chasuble was made out of a larger gold-interwoven mantle and its gold-embroidered border was transferred to a cape, after the damaged parts had been removed.<sup>39</sup> Several extant pieces illustrate such a procedure. A chasuble composed of inscribed silk fragments woven in Muslim Spain and datable to 1107–1143 is preserved in a parochial church near Burgos, Spain. The so-called chasuble of St. Thomas Becket, who

<sup>35</sup> Maqrīzī, *Ittiʿāz al-Ḥunafāʾ bi-akhbar al-ʿimmat al-Fāṭimyyīn al-Khulafāʾ*, ed. M. H. M. Ahmad (Cairo, 1971), 2:40. I wish to thank Yaacov Lev, Bar-Ilan University, Ramat Gan, Israel, for drawing my attention to this important passage and providing me with its accurate translation. On the transfer of the ruler and his court to Egypt, see M. Brett, *The Rise of the Fatimids. The World of the Mediterranean and the Middle East in the Fourth Century of the Hijra, Tenth Century CE* (Leiden, 2001), 316–27. A further example of the use of a silk cloth long after its production appears below, note 40.

<sup>36</sup> However, some literary works also reflect silks in the life of lower social strata. For a Byzantine example, see below, page 209. Such is also the case of the *Trecentonovelle* of the Florentine author Franco Sacchetti (ca. 1335–ca. 1400), who mentions silk in rather common use among burgesses and peasants in Italy: see D. Perocco, “La seta nella letteratura italiana dal Duecento al Seicento,” in Molà et al., *La seta in Italia* (as above, note 3), 255–56. For visual sources, see above, note 23.

<sup>37</sup> Old and damaged silks are sometimes recorded, as in the papal inventory of 1295: E. Molinier, “Inventaire du trésor du Saint Siège,” *BEC* 47 (1886): nos. 1441, 1447.

<sup>38</sup> See F. Piponnier, “Usages et diffusion de la soie,” in Cavaciocchi, *La seta in Europa* (as above, note 23), 786–87.

<sup>39</sup> Text in O. Lehmann-Brockhaus, *Schriftquellen zur Kunstgeschichte des 11. und 12. Jhs. für Deutschland, Lothringen und Italien* (Berlin, 1938), 631–32, no. 2673.

died in 1170, is a patchwork of many pieces stitched together, one of which was produced in 1116 in Almería, Spain, according to the inscription it bears. A magnificent mantle for the statue of the Virgin, originally belonging to a church near Valencia, Spain, is made of inscribed silk fragments presumably manufactured in Egypt or Syria in the first half of the fourteenth century. A variety of textiles, namely linen cloth, half-silk, and silk tapestry weave of different origins were combined in the manufacturing of a high-domed hat in Egypt around 1200.<sup>40</sup> The reuse of silk fragments reached even the lower end of the social scale. Such was the case of small pieces of heavily used luxury fabrics with high-quality weaves and designs, well hidden in a cave of the Qarantal cliff between Jericho and the Jordan River until their discovery in 1993. The fragments, a number of which display Arabic inscriptions or pseudo-inscriptions, were produced on sophisticated looms with apparatus for mechanical patterning, presumably in Egypt, in the period extending from the early ninth to the late eleventh century. Some of them were stitched together to make a new garment or were sewn onto a cheap fabric, such as a simple undyed linen cloth, to decorate it.<sup>41</sup> These pieces were apparently owned by Bedouins who collected them for their own use or in order to sell them.

The cost of high-grade silks, due primarily to the raw materials used in their manufacture and to a lesser extent to the large input of labor, restricted the clientele of these fabrics to the upper ranks of society in all the three major regions covered here, as well as to various ecclesiastical institutions in Byzantium and the Christian West. These textiles, therefore, offer only a partial and biased insight into silk economics. On the other hand, medium- and low-quality silks, which will soon be examined, were less resistant than precious ones, more frequently used by individuals, and often transmitted, whether by inheritance or as part of dowries.<sup>42</sup> As a result they needed more repairs, generally had a shorter life span, and only seldom survive. These facts underline the importance of adequate written documentation for a balanced view of silk manufacture, diffusion, consumption, and artistic interaction.

Normative sources are generally considered reliable in that respect. The most relevant one for Byzantium is the Ἐπαρχικὸν Βιβλίον or *Book of the Eparch*, compiled in the early tenth century, which includes the regulations of five guilds involved in various ways in silk

<sup>40</sup> See respectively R. Ettinghausen, O. Grabar, and M. Jenkins-Madina, *Islamic Art and Architecture, 650–1250* (New Haven, Conn., 2001), 281 and 280, fig. 459; A. Simon-Cahn, “The Fermo Chasuble of St. Thomas Becket and Hispano-Moresque Cosmological Silks: Some Speculations on the Adaptive Reuse of Textiles,” *Muqarnas* 10 (1993): 1–5, a piece providing a further example of the chronological gap sometimes existing between the production and use of silks; A. E. Wardwell, “Flight of the Phoenix: Crosscurrents in Late Thirteenth- to Fourteenth-Century Silk Patterns and Motifs,” *Bulletin of the Cleveland Museum of Art* 74 (January 1987): 22 and fig. 27. H. Granger-Taylor, “Three Fragmentary Hats of around the Early 13th Century, One Incorporating Pieces of a Sicilian Tapestry, Found at Qasr Ibrim in Southern Egypt,” in R. Varioli-Piazza, ed., *Interdisciplinary Approach to the Study and Conservation of Medieval Textiles. Interim Meeting, Palermo 22–24 Ottobre 1998, Palazzo Steri* (Preprints) (Rome, 1998), 44–49; on half-silks, see below, pages 208–9.

<sup>41</sup> On these fragments, see O. Shamir and A. Baginski, “Medieval Mediterranean Textiles, Basketry, and Cordage Newly Excavated in Israel,” in Y. Lev, ed., *Towns and Material Culture in the Medieval Middle East* (Leiden, 2002), 135–40 and pl. 1. I wish to thank both authors for supplying me with additional information and enabling me to examine some pieces.

<sup>42</sup> Such were possibly the garment that a Jewish bride of Asia Minor received from her mother in 1022 (see below, p. 208) and the secondhand women's garments mentioned in several Jewish marriage contracts drafted in 11th- and 12th-century Egypt, on which see J. Olszowsky-Schlanger, *Karaite Marriage Documents from the Cairo Geniza. Legal Tradition and Community Life in Mediaeval Egypt and Palestine*, *Études sur le judaïsme médiéval* 20 (Leiden, 1998), 227.

manufacture and trade in Constantinople.<sup>43</sup> The thirteenth- and fourteenth-century regulations of silk guilds issued in Venice, Lucca, and other Italian cities provide similar evidence.<sup>44</sup> They mainly or exclusively refer to the production and marketing of high- and medium-grade fabrics. Other normative sources deal with consumption. Such is the case of sumptuary laws enacted in various cities of the Christian West from the thirteenth century onward, the adoption of which was induced by religious and moral considerations, yet responded also to social and economic incentives. These laws were addressed to the entire social body, although sometimes aimed specifically at women or at the lower ranks of society. They were intended to prevent the ruinous effects of heightened luxury consumption in clothing, especially feminine attire, on the assets of families belonging to the upper and middle social strata, as well as the immobilization of capital detrimental to the operation of the economy. Sumptuary laws also strove to perpetuate or enforce social hierarchy in clothing by preventing individuals positioned below the élite from wearing luxury textiles or by curbing the latter's display in the urban environment, which witnessed the daily mingling of people belonging to various walks of life. While dealing mainly with medium- and high-quality silks, sumptuary laws also refer sometimes to lower-grade fabrics.<sup>45</sup> In sum, however informative, normative sources primarily reflect governmental or ecclesiastical attitudes and policies, as well as the interests of the social élites in power. They largely or entirely overlook the production and consumption of low-quality fabrics, as well as that of small silk pieces manufactured on simple narrow looms or tablets by weavers working at home, outside the framework of ateliers subjected to state supervision in Byzantium or control by the governments of city-states in Italy.<sup>46</sup>

<sup>43</sup> *Das Eparchenbuch Leons des Weisen. Einführung, Edition, Übersetzung und Indices*, ed. and trans. J. Koder, CFHB 33 (Vienna, 1991) (hereafter *EB*), 90–106, chaps. 4–8. G. C. Maniatis, "Organization, Market Structure, and Modus Operandi of the Private Silk Industry in Tenth-Century Byzantium," *DOP* 53 (1999): 263–332, is the latest study dealing extensively with the silk guilds of Constantinople. I shall express elsewhere my reservations about its content, yet it may already be useful to stress here two points: first, Maniatis fails to take into account the existence of an "underground" activity exercised or sponsored by silk workers, entrepreneurs, and merchants striving to escape taxation and state supervision, and favored by pervasive venality within the ranks of the imperial administration; second, he overlooks the production of small silk pieces outside the guild framework, on which see below, note 46.

<sup>44</sup> E.g., the Venetian *Capitulare samitariorum* of 1265, which deals with silk weaving: G. Monticolo and E. Besta, eds., *I capitolari delle Arti sottoposte alla Giustizia e poi alla Giustizia Vecchia dalle origini al MCCCXXX*, 3 vols. (Rome, 1896–1914), 2:27–38; for Lucca: D. and M. King, "Silk Weaves of Lucca in 1376," in I. Estham and M. Nockert, eds., *Opera Textilia Variorum Temporum. To Honour Agnes Geijer on Her Ninetieth Birthday, 26th October 1988* (Stockholm, 1988), 67–76.

<sup>45</sup> On Italian cities, see M. G. Muzzarelli, "Seta posseduta e seta consentita: Dalle aspirazioni individuali alle norme santuarie nel basso medioevo," in Molà et al., *La seta in Italia* (as above, note 3), 211–32; M. G. Muzzarelli, *Guardaroba medievale. Vesti e società dal XIII al XVI secolo* (Bologna, 1999), 268–85, 306–49. Sumptuary laws offer rich evidence about articles of clothing and fashions. On the association of luxurious feminine clothing with sin, its condemnation, and its limitation, regardless of social stratification, see also D. Owen Hughes, "La mode," in G. Duby and M. Perrot, gen. eds., *Histoire des femmes en Occident* (Paris, 1990–92), vol. 2, ed. C. Klapisch-Zuber, *Le moyen âge*, 155–65. Interestingly, some Italian cities, such as Siena in 1343, allowed prostitutes to wear types of clothing prohibited by sumptuary laws, including silks, in the hope that the association would discourage other women from adopting them; the urban legislation of 1444 in Terni limited velvet, a costly silk cloth, as well as silk to the sleeves of women's dresses: see D. Owen Hughes, "Distinguishing Signs: Ear-Rings, Jews and Franciscan Rhetoric in the Italian Renaissance City," *Past and Present* 112 (1986): 25, 27–28. Jewish regulations enacted at Forlì in 1418 provided that cloaks in silk and velvet should be hidden under other textiles: *ibid.*, 26–27.

<sup>46</sup> On small pieces, see also below, pp. 207–8 and 228. In Venice the mercers, who formed a distinct guild, supplied raw materials for small-scale domestic weaving and embroidery and sold a portion of the small man-

The nature, daily functions, and circulation of silks are more faithfully reflected by other types of sources, namely, marriage contracts, inventories, especially those listing dowries and household items, wills, personal correspondence, business letters and agreements, as well as documents referring to the latter's content. Rather few such Byzantine sources survive from the period covered by this study.<sup>47</sup> By contrast, the Jewish documents of the Cairo Geniza, as well as numerous notarial charters and inventories drafted in the Christian West, yield abundant information about silks in social and economic life.<sup>48</sup> This is also the case of judicial proceedings, *fatwās* in Muslim societies, and some Jewish Bible commentaries.<sup>49</sup> Finally, various literary works written in Greek, Persian, Arabic, and western languages offer evidence about the nature, color schemes, and uses of silks.<sup>50</sup> In sum, the perusal of written material reveals the numerous functions, the broad range in quality, and the numerous types of silks manufactured in Byzantium, the Muslim world, and the Christian West, in response to a variegated demand in court circles, among the social élites, and further down along the social scale. In the cities of the Muslim Middle East, the growth of demand was already well under way by the eighth century. In Byzantium and southern Italy it rapidly expanded from the social élite to lower ranks of society around the turn of the eleventh century, and later spread throughout the Christian West.<sup>51</sup>

Written and visual sources point to multiple uses of silks, beyond the most conspicuous one for garments. This was especially the case in the Muslim world, in which wooden furniture was largely limited to trunks, chests, and boxes for the storage of clothes, items of bedding, and kitchen utensils, while stools appear only seldom.<sup>52</sup> Without exhausting

unfactured pieces: Monticolo and Besta, *I capitolari delle Arti*, 2:307–27: *Capitulare artis mercariorum*. See also Jacoby, “Dalla materia prima,” 269–70, and on Genoa, see idem, “Genoa, Silk Trade and Silk Manufacture,” 31–35. The domestic production of small pieces outside the guild system must also have been common in Constantinople; it will be discussed elsewhere. On silk weaving in Constantinopolitan workshops other than those of guild members, see for the time being Jacoby, “The Jews and the Silk Industry of Constantinople,” 3–17.

<sup>47</sup> *ODB* 2: 1005, s.v. “Inventory,” and 3:2198, s.v. “Wills.” Several Byzantine inventories and wills listing silks have been analyzed by N. Oikonomidès, “The Contents of the Byzantine House from the Eleventh to the Fifteenth Century,” *DOP* 44 (1990): 205–14, repr. in idem, *Byzantium from the Ninth Century to the Fourth Crusade. Studies, Texts, Monuments* (Aldershot, 1992), no. 8. For the translation of such documents, see J. Thomas and A. Constantinides Hero, eds., *Byzantine Monastic Foundation Documents. A Complete Translation of the Surviving Founders' Typika and Testaments*, 5 vols., DOS 35 (Washington, D.C., 2000). A Jewish document from Byzantine Asia Minor, dated 1022, should also be taken into account: see below, p. 208 and note 56.

<sup>48</sup> On the nature of the Geniza documents, see above, note 15. Thousands of notarial charters from the Christian West drafted in the period covered by this article have been edited, yet many more remain unpublished. Silks are often listed in the numerous lay and ecclesiastical inventories from that region.

<sup>49</sup> Two *fatwās* mentioning silks are summarized in V. Lagardère, *Histoire et société en Occident musulman au moyen âge. Analyse du Mi'yār d'al-Wanšārīsi*, Collection de la Casa de Velásquez 53 (Madrid, 1995), 102, no. 2/156, and 355, no. 5/279, the latter case being also mentioned *ibid.*, 452, no. 7/125. For Bible commentaries, see below, p. 209.

<sup>50</sup> E.g., see Jacoby, “Silk in Western Byzantium,” *ibid.*, 461–62, 475; idem, “Silk Crosses the Mediterranean,” 62–63; above, note 36. For Arabic and Persian works, see Serjeant, *Islamic Textiles*.

<sup>51</sup> See Serjeant, *Islamic Textiles*; Jacoby, “Silk in Western Byzantium,” 471–78, on Byzantium; idem, “Silk Crosses the Mediterranean,” 62–63, on the Christian West. Further evidence for all three regions appears below.

<sup>52</sup> See Goitein, *A Mediterranean Society*, 4:150–200 (clothing), 105–32, 297–309 (furnishings of the home); Y. K. Stillman, “Textiles and Patterns Come to Life through the Cairo Geniza,” in *Islamische Textilkunst* (as above, note 23), 35–52; Olszowsky-Schlanger, *Karaite Marriage Documents*, 231–32. J. Lemaistre uses the expression “mobilier textile” in G. Cornu and M. Martiniani-Reber, eds., *Tissus d'Égypte, témoins du monde arabe, VIIIe–XVe siècles. Collection Bouvier* (Geneva–Paris, 1993), 30–34. See also R. Ettinghausen, “The Man-Made Setting,” in B. Lewis, ed., *The World of Islam* (London, 1976), 71–72, on the importance of textiles and their aesthetic impact on other aspects of Islamic material culture.

the list, one may point to small silk items such as ribbons, belts, veils, headscarves, silk-covered hats, and kerchiefs, the consumption of which must have been substantial in all three major regions covered by this study. Even when women used face veils, headscarves, and kerchiefs for reasons of modesty, they could easily turn them into clothing items enhancing their appearance and displaying elegance as well as social and economic standing.<sup>53</sup> To the small silk accessories we may add others woven or cut to serve as purses, pillowcases, bedcovers, curtains, wall hangings or for use in upholstery and bookbinding. The quality of the cloth also varied widely, depending on the raw materials used and the nature of the weave. Each domesticated silkworm produces a continuous filament 900 to 1,200 m long. Several of them were twisted together to increase the tensile strength of the thread entering into the weaving of high- and medium-grade textiles. At the lower end of the scale, silk cloth was woven of greige, the silk filament still surrounded by gum sericin, the adhesive holding several filaments together, which prevents proper dyeing.

Since silk was an expensive raw material, most of it regardless of quality was exploited to maximize profits. Short fibers coming from damaged cocoons and surface floss, as well as waste silk discarded in the process of turning raw silk into thread, had first to be spun like wool, flax, cotton, or hemp before being woven into a silk fabric of a coarse and uneven quality known in Byzantium as *koukoularikon*.<sup>54</sup> In the tenth century the ceremonial garments and leggings of some contingents in the imperial army were made of that cloth.<sup>55</sup> In 1022 a Jewish bride from a modest household living in the Anatolian city of Mastaura received from her mother a “double red *koukoularikon* garment” worth 1 1/2 nomisma.<sup>56</sup> When the famous Marco Polo died in Venice in 1324, he owned a piece of green *chocholario* and two bedcovers of that same material, one yellow and the other blood-red, the provenance of which is not stated.<sup>57</sup> The few examples adduced here, taken at random from consecutive periods, different regions, and different social and cultural settings, clearly hint at the wide diffusion of that type of low-grade silk cloth.<sup>58</sup>

<sup>53</sup> On their use in Byzantium, see M. G. Parani, *Reconstructing the Reality of Images. Byzantine Material Culture and Religious Iconography (11th–15th Centuries)* (Leiden–Boston, 2003), 77–78, and on belts, kerchiefs, and silk-covered hats in masculine attire, *ibid.*, 65–71. On curtains and wall hangings in Byzantium, mentioned below, see *ibid.*, 178–84. On small silk items in Egypt and in the West, see respectively below, pp. 221–22, and above, note 46.

<sup>54</sup> The uneven, coarse filaments of this low-grade silk with their bulges are verbally described and depicted by a drawing in the Florentine trade manual of Francesco Balducci Pegolotti, *La pratica della mercatura*, ed. A. Evans (Cambridge, Mass., 1936), 382, compiled in the 1330s. Cloth woven of that type of silk is attested in the 3d- and 4th-century Roman Empire: see Schmitter, “Subsericae vestes,” 200–225, esp. 211, 222–24. The term *koukoulariko* is still used in modern Greek.

<sup>55</sup> Constantini Porphyrogeniti imperatoris *De ceremoniis aulae byzantine*, 2.45, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 1:678, lines 4, 7–8: ἱμάτια κουκουλάρικα ρ', τουβία κουκουλάρικα ζυγάς ρ'. J. F. Haldon, “Theory and Practice in Tenth-Century Military Administration. Chapters II, 44 and 45 of the *Book of Ceremonies*,” *TM* 13 (2000): 234, translates “silken garments” and “silken leggings,” without taking into account the specific nature of the cloth.

<sup>56</sup> See D. Jacoby, “What Do We Learn about Byzantine Asia Minor from the Documents of the Cairo Geniza?” in *ΗΒυζαντινή Μικρά Ασία (6ος–12ος αι.)* [= Byzantine Asia Minor (6th–12th cent.)], Institute for Byzantine Research, National Hellenic Foundation (Athens, 1998), 84–86, repr. in *idem, Byzantium, Latin Romania and the Mediterranean*, no. 1. This was either a double-weave cloth consisting of two different layers woven one above the other or a double-faced weave, both faces of which could be displayed.

<sup>57</sup> Listed in his will, inserted in a document of 1366: ed. B. Cecchetti, *La vita dei Veneziani nel 1300. Le vesti* (Venice, 1886), repr. in *idem, La vita dei Veneziani nel 1300*, introduction by U. Stefanutti (Bologna, 1980), 126–27.

<sup>58</sup> Floss silk threads were also used for embroidery on silk and linen cloth of the late Ayyūbid and early Mamlūk periods, discovered on Jazirat Fara'un (Coral Island) in the Red Sea south of Eilat, Israel: see Shamir and Baginski, “Medieval Mediterranean Textiles,” 142, 145, and pl. 3.



In addition, beginning in the second century A.D. in the Roman Empire, both first- and second-grade silk was combined with wool, linen, or cotton in the manufacture of half-silks, and this was later also the case with hemp in the Christian West. Threads other than degummed silk had several advantages over the latter. They were cheaper and, since they were thicker, smaller quantities of raw material were required and weaving proceeded at a faster pace. Half-silks were affordable to a larger clientele than all-silk fabrics, although their price too varied widely like the latter's, depending upon the nature and quality of the raw materials, the complexity of the weaves, and the colorants used.<sup>59</sup> Some half-silks from Byzantine Egypt have survived, yet so far only two later half-silks have been tentatively identified as Byzantine. One of them is ascribed to the ninth century and the other to the Palaiologan period. There is good reason to believe, though, that these fabrics were far more common in Byzantium than it would seem at first glance, despite the dearth of direct evidence in that respect. They must have been produced on a large scale by the early eleventh century. This assumption is enhanced by two Jewish Bible commentaries composed in Hebrew in the empire, one in the eleventh and the other in the twelfth century. Half-silks are attested in Constantinople by a twelfth-century author, known as Ptochoprodromos. His wife had a two-colored half-silk dress made of silk and cotton (τὸ διβλαντάριν τὸ κουτνίν), yet reproached him for never having offered her an all-silk dress (μεταξωτὸν ἱμάτιν), which seems to imply that at that time such a dress could have been expected as a luxury item even in a modest household of the empire's capital.<sup>60</sup> A red pillowcase of λινοκούκουλον, woven of linen and second-grade silk, is attested in Thessalonike in 1384. It was valued at 4 hyperpera, a rather modest sum in the debased Byzantine currency of that period.<sup>61</sup> Half-silks were also produced in Muslim countries in response to a large demand, namely *kandī* and the highly prized plain fabric called *mulḥam*, both with a silk warp and a weft of another thread.<sup>62</sup> Mixed fabrics continued to be manufactured in the fourteenth century in a region extending from Central Asia to northeastern Iran, some with intertwined gold thread.<sup>63</sup> In the thirteenth and fourteenth centuries, fabrics with either silk warp or silk weft were also produced in Italy and Spain.<sup>64</sup>

Colorants were also an important component in the price of silks, especially those used for luxury fabrics. Only a few of these are discussed here. The most expensive one, which

<sup>59</sup> Examples of expensive half-silks woven of silk and hemp, some with intertwined gold thread, are adduced below, note 64 and pages 230, 235.

<sup>60</sup> See Jacoby, "Silk in Western Byzantium," 474–75, for what precedes in this paragraph.

<sup>61</sup> N. Oikonomidēs, ed., *Actes de Docheiariou*, Archives de l'Athos 13 (Paris, 1984), no. 49, 264, lines 29–30.

<sup>62</sup> See mainly Serjeant, *Islamic Textiles*, 249, 255, Index of technical terms, s.vv. "Kandjī," "Mulḥam." See also below, note 64. A Jewish bride in Egypt had a *dabīqī ḥarīrī* dress, according to a document presumably of the 1060s: see Olszowsky-Schlanger, *Karaite Marriage Documents*, 227. Since *dabīqī* linen is often mentioned, this must have been a mixed cloth made of silk and linen, not a "silkened" linen dress as stated by that author.

<sup>63</sup> See A. E. Wardwell, "Panni Tartarici: Eastern Islamic Silks Woven with Gold and Silver (13th and 14th Centuries)," *Islamic Art* 3 (1988–89): 105–6. Half-silks were already produced by the 6th century in Central Asia, as revealed by an excavated fabric datable to that period: see *ibid.*, 105.

<sup>64</sup> See King, "Some Unrecognised Venetian Woven Fabrics," 53–63, esp. 55–56; D. and M. King, "Silk Weaves of Lucca in 1376," 74; D. King, "Types of Silk Cloth Used in England 1200–1500," in Cavaciocchi, *La seta in Europa* (as above, note 23), 459–61, on *kanjī*, similar to satin, and some Italian samites (on samite, see below, note 165) with linen or hemp warp; M. F. Mazzaoui, *The Italian Cotton Industry in the Later Middle Ages, 1100–1600* (Cambridge, 1981), 166 and 199 n. 9; for the blending of silk and linen in 13th-century Spain, see C. Herrero Carretero, *Museo de Telas Medievales, Monasterio de Santa Maria la Real de Huelgas* (Madrid, 1988). On Venetian and Lucchese half-silks, see also below, p. 230.

acted as a status symbol, was the purple dye obtained from various genera of marine mollusks collectively known as murex. Twelve thousand snails of *Murex brandaris* yield no more than 1.4 g of pure dye, enough to color only the trim of a single garment. The color of silks dyed with murex purple was far from uniform, and various shades were obtained, depending on the dyeing process.<sup>65</sup> According to Michael Psellos, Emperor Basil II (976–1025) preferred to wear a robe of purple in a dark hue, rather than one in bright purple.<sup>66</sup> The production of shellfish purple in Byzantium was controlled and subsidized by the imperial court, and its use was restricted to the coloring of silks for the latter's consumption.<sup>67</sup> Silk threads or fabrics may still have been dyed with murex purple in Thebes shortly after 1204. This is suggested by Michael Choniates, who sometime after 1208 referred to purple fishers operating off the Aegean island of Gyaros, located between Andros and Kea.<sup>68</sup> Yet, more generally, after the collapse of imperial power in 1204 as a result of the Fourth Crusade, no Byzantine emperor nor any Latin ruler in former Byzantine territories could muster the financial resources required for the pursuit of murex purple production. On the other hand, murex fishing and dyeing with genuine purple are attested for Egypt in the tenth to thirteenth centuries. Egyptian purple makers are also documented in the fourteenth century.<sup>69</sup> However, since there is no evidence for fishing of murex in that period, one may wonder whether they still handled the genuine marine colorant or whether they dealt with substitutes. Genuine murex appears to have been used only sparingly in Egypt.<sup>70</sup> By contrast, there is not a single "western" record of murex fishing, nor of trading or use of the colorant it yielded, either in the Frankish Levant or in the West. This is all the more striking since a twelfth-century Geniza document mentions Jewish fishermen from Alexandria collecting the shellfish along the Levantine coast under Frankish rule, Acre serving as one of their bases of operation.<sup>71</sup> Nevertheless, the earliest known "western" trade manual, compiled around 1270 by a Venetian merchant or notary residing in

<sup>65</sup> The yield just mentioned was obtained in an experiment reported in 1908. A large number of studies deal with murex purple. See Jacoby, "Silk in Western Byzantium," 455–56 and n. 17–19; O. Elsner, "Solution of the Enigmas of Dyeing Tyrian Purple and the Biblical Tekhelet," *Dyes in History and Archeology* 10 (1992): 14–15. Recent studies appear in O. Longo, ed., *La porpora. Realtà e immaginario di un colore simbolico*, Atti del Convegno di Studio, Venezia, 24 e 25 ottobre 1996 (Venice, 1998), and in D. Cardon, *Le monde des teintures naturelles* (Paris, 2003), 421–34, 438–49. On shades, see Cardon, *Teintures précieuses*, 22. On dyeing with genuine purple according to the recipe of Pliny the Elder, see J. E. Doumet, "De la teinture en pourpre des anciens," 46–57.

<sup>66</sup> Michel Psellos, *Chronographie ou histoire d'un siècle de Byzance (976–1077)*, ed. E. Renauld, 2 vols. (Paris, 1926–28), 1:20 (bk. 2.31.22–24).

<sup>67</sup> A. Carile, "Produzione e usi della porpora nell'impero bizantino," in Longo, *La porpora* (as above, note 65), 243–69; Jacoby, "Silk in Western Byzantium," 455–58, 481–82, 490.

<sup>68</sup> Michael Choniates, *Epistulae*, ed. F. Kolovou, CFHB 41 (Berlin–New York, 2001), 222, no. 135, lines 9–10; dating by G. Stadtmüller, "Michael Choniates, Metropolit von Athen (c. 1138–c. 1222)," *OC* 33.2 = 91 (1934): 260. On the use of murex purple in Thebes, see Jacoby, "Silk in Western Byzantium," 466, 481–82, 488–89, 493.

<sup>69</sup> Evidence in M. Shatzmiller, *Labour in the Medieval Islamic World* (Leiden, 1994), 101, 103, 119. There were special terms for those dealing with genuine purple. The fisherman of murex was called *māḥarī*, and the purple dye maker, seller, and dyer, *ardjawani*: in the 14th century, purple makers and workers were also called *sānī al-urdjuwān*. On the fishing of murex purple, see also below, and note 71.

<sup>70</sup> See Jacoby, "Silk in Western Byzantium," 493.

<sup>71</sup> New ed. of the Arabic text with Hebrew trans. by M. Gil, *Erets Israel ba-tequfa ha-muslemī ha-rishona (634–1099)* [= Palestine during the First Muslim Period (634–1099)], 3 vols. (Tel Aviv, 1983) [Hebrew], 3:511–14, no. 599, esp. lines 37–38, who dates the document to ca. 1115, whereas the previous editor, S. D. Goitein, ascribed it to ca. 1180. See also Jacoby, "Silk in Western Byzantium," 493 and n. 232.

that city, fails to refer to genuine purple, although it mentions other dyestuffs: indigo, lac, madder, brazilwood, and saffron.<sup>72</sup>

Less expensive, yet nevertheless high-grade and solid colorants were obtained from the pregnant female of parasite insects, in shades ranging from vermilion yielded by *Kermes vermilio*, known in the medieval West as *grana*,<sup>73</sup> to crimson or purplish-red by various species labeled *Porphyrophora* and known as *chermisi* or cochineal.<sup>74</sup> In 1313 the price ratio of *grana* or kermes to silk at Arta, Epiros, was 1.15 to 2.50 per weight unit.<sup>75</sup> Fifteenth- and sixteenth-century Italian recipes recommend the use of 6 to 14 pounds of the expensive *chermisi*, depending on the species used, for one pound of silk in order to obtain a good crimson color.<sup>76</sup> The amount of dyestuff required was thus much larger than that of silk, and although the price of the former varied between somewhat less than one-third and less than half of the latter, the financial investment in colorant was substantial and larger than in silk.<sup>77</sup> In addition, dyeing with cochineal was more complex than with kermes and required more labor input.<sup>78</sup>

Not surprisingly, in order to lower production costs, expensive colorants were replaced by substitutes or adulterated. “Fake” purple could be obtained either by using madder and an iron mordant, or else by double-dyeing with the root of madder (*Rubia tinctorum*) providing red and using indigotin plants for the required blue colorant.<sup>79</sup> In Egypt a mixture of madder and indigo was already utilized in the Pharaonic period. Purple substitutes were also common in Byzantium. Tenth-century Byzantine sources mention ψευδόξεα or “pseudo-purple” for the dyeing of low-quality cloth and other items. Such purple also entered into the production of medium-grade garments, as well as that of high-quality silks commissioned by the imperial court for distribution as gifts to foreigners.<sup>80</sup> Indeed, a mixture of indogen and madder has been identified in an inscribed silk adorned with lions,

<sup>72</sup> On its dating and attribution, see D. Jacoby, “A Venetian Manual of Commercial Practice from Crusader Acre,” in G. Airal di and B. Z. Kedar, eds., *I comuni italiani nel Regno crociato di Gerusalemme*, Collana storica di fonti e studi, diretta da G. Pitarino 48 (Genoa, 1986), 403–28, repr. in D. Jacoby, *Studies on the Crusader States and on Venetian Expansion* (Northampton, 1989), no. 7. U. Tucci, “Venezia senza porpora,” in Longo, *La porpora* (as above, note 65), 388, stresses the absence of genuine purple from later “western” trade manuals.

<sup>73</sup> *Kermes ilicis* also belongs to the same group of insects: see D. Cardon, “Le ‘ver’ du rouge. Essai d’entomologie historique,” *Cahiers d’histoire et de philosophie des sciences* n.s. 28 (1990): 1–178; idem, *Le monde des teintures naturelles*, 469–83. On kermes and kermes-dyed silks in Byzantium before 1204, see Jacoby, “Silk in Western Byzantium,” 464, 483, 485, 496, 498; in Greece at a later period, see idem, “Silk Production in the Frankish Peloponnese: The Evidence of Fourteenth-Century Surveys and Reports,” in H. A. Kalligas, ed., *Travellers and Officials in the Peloponnese. Descriptions—Reports—Statistics*, in *Honour of Sir Steven Runciman* (Monemvasia, 1994), 45–47, 61, repr. in idem, *Trade*, no. 8; D. Jacoby, “The Production of Silk Textiles in Latin Greece,” in *Τεχνογνωσία στη λατινοκρατούμενη Ελλάδα* [= Technology in Latin-Occupied Greece] (Athens, 2000), 26–28.

<sup>74</sup> See Cardon, *Le monde des teintures naturelles*, 503–6; idem, “Du ‘verme cremexe’ au ‘veluto chremesino’: Une filière vénitienne du cramoisi au XVe siècle,” in Molà et al., *La seta in Italia* (as above, note 3), 64–73.

<sup>75</sup> See Jacoby, “Dalla materia prima,” 273 and 298 n. 61.

<sup>76</sup> See Cardon, “Du ‘verme cremexe,’” 71.

<sup>77</sup> For prices of cochineal in Constantinople in the late 1430s, see *ibid.*, 66–68. I shall deal elsewhere with contemporary silk prices on that market.

<sup>78</sup> See L. Molà, *The Silk Industry of Renaissance Venice* (Baltimore–London, 2000), 111 and 359 n. 10. In order to avoid confusion, note that Molà wrongly applies the term “kermes” to *chermisi*.

<sup>79</sup> On such techniques, see Z. C. Koren, “Microscopic and Chromatographic Analyses of Decorative Band Colors on Nabatean ‘En Rahel Textiles—Kermes and Shaded Bands,” *Atiqot* 38 (1999): 129–36.

<sup>80</sup> See Jacoby, “Silk in Western Byzantium,” 481–83. Cardon, *Teintures précieuses*, 105–9, offers examples of Coptic linen fabrics dyed with substitute purple.

dated to 976–1025, preserved until the nineteenth century in a church of the Lower Rhine region.<sup>81</sup>

The issues explored so far have already demonstrated the existence of features common to Byzantium, the Muslim world, and the Christian West with respect to the uses, nature, and qualities of silk fabrics. At times there was also a strong visual affinity between silks produced in two of these regions. Indeed, the manufacturers of various high-grade Byzantine and Islamic fabrics borrowed motifs, patterns, and pictorial compositions from a common source, namely, Sasanian textiles and artifacts. In addition, there was also an ongoing interaction between the empire and the Muslim world in that field. It is sometimes difficult, therefore, if not impossible to determine the provenance and dating of silks exhibiting such elements.

A few examples may illustrate these points. The hybrid mythical animal part dog or lion and part bird symbolizing royal power, commonly called *senmurv*, appears within roundels on a silk preserved in Brussels, which has been ascribed by some to Byzantium and by others to Iran, the dating varying widely from the seventh to the eleventh century.<sup>82</sup> Silks depicting elephants were manufactured in both Islamic and Byzantine weaving establishments. One of them with a woven Kufic inscription, the Shroud of St. Josse preserved at the Louvre, Paris, was apparently produced in eastern Iran in the mid-tenth century, while about the same time, in 938, Emperor Romanos I Lekapenos sent to the ‘Abbasid caliph al-Radi a large Byzantine silk cloak made of an emerald-green *siqlatun* cloth decorated with elephants.<sup>83</sup> Incidentally, *siqlatun* was a fabric adorned with roundels enclosing birds, animals, or designs, the name of which, derived from Byzantine Greek σιγλᾶτος or “sealed,” points to the Byzantine origin of its ornamental pattern.<sup>84</sup> Hunting, a royal sport, was also borrowed from the Sasanian repertory and often depicted on silks. A piece with a hunting scene preserved at the British Museum has been ascribed respectively to Egypt, Byzantium, Iran, or Central Asia, and to the seventh, eighth, or ninth century.<sup>85</sup> Another silk with addorsed and regardant griffins in interlocking roundels, pre-

<sup>81</sup> On this silk and its purple, see A. Muthesius, “A Practical Approach to the History of Byzantine Silk Weaving,” *JÖB* 34 (1984): 241–44, 247, 249, repr. in eadem, *Studies*, 59–60, 63; see also Muthesius, *Byzantine Silk Weaving*, 28–31.

<sup>82</sup> See M. T. Lucidi, ed., *La seta e la sua via* (Rome, 1994), 167 and 202, no. 31; A. Jeroussalimskaia, “Soieries sassanides,” in *Splendeur des Sassanides. L’empire perse entre Rome et la Chine [224–642]* (Brussels, 1993), 114, 117–18, who points out that the appellation *senmurv* is incorrect.

<sup>83</sup> On the St. Josse and other Byzantine or Islamic elephant silks, see Muthesius, *Byzantine Silk Weaving*, 38–39. The silk sent by Romanos I Lekapenos is described in the *Book of Gifts and Rarities (Kitāb al-Hadāyā wa al-Tiḥaf): Selections Compiled in the Fifteenth Century from an Eleventh-Century Manuscript on Gifts and Treasures*, trans. G. al-Ḥijjāwī al-Qaddūmī (Cambridge, Mass., 1996), 101, §73. On the sources, author, and dating of this work, compiled in Cairo sometime after 1071, yet preserved in a later version, see *ibid.*, 5–25. A coverlet or mantle adorned with elephants is mentioned by an Arab author in 1180: see Serjeant, *Islamic Textiles*, 22.

<sup>84</sup> On *siqlātūn*, see Lombard, *Les textiles dans le monde musulman*, 242–44; Jacoby, “Silk in Western Byzantium,” 460 n. 36; Jacoby, “Silk Crosses the Mediterranean,” 61, 64. It has been suggested that the Byzantine term σιγλᾶτος was applied to a specific type of silks to which official seals were attached. This interpretation is excluded, since seals were apparently attached to *all* the silks manufactured in workshops supervised by the city eparch in Constantinople and presumably by state officials elsewhere in the empire, before these fabrics were marketed. I shall return elsewhere to this issue. Cornu and Martiniani-Reber, “Étoffes et vêtements,” 50–51, include silks with square and octagonal motifs in the category of *siqlātūn*, yet without any supporting evidence to that effect.

<sup>85</sup> See Lucidi, *La seta e la sua via*, 176 and 208, no. 64.

sently in the Metropolitan Museum of Art in New York, is dated to the first half of the thirteenth century and ascribed to either Sicily, North Africa, or Central Asia.<sup>86</sup> An extreme case with respect to dating is provided by a piece adorned with ducks, winged griffons, and palmettes, for which no exact parallel is known. It has been attributed either to Egypt or Byzantium and dated from the fifth to the fourteenth century, yet may belong to the twelfth or the thirteenth.<sup>87</sup>

In the framework of diplomatic relations it was customary for Byzantine emperors and Muslim rulers, especially the 'Abbāsids and the Fāṭimids, as well as for Muslim rulers between themselves to exchange precious gifts, with which they attempted to impress and surpass their counterparts. Christian and Muslim rulers and their entourages shared a culture of luxurious objects, despite some differences in the latter's use in their respective courts. They appreciated and enjoyed gifts, often sumptuous and elaborately crafted objects, for both their intrinsic material and artistic value.<sup>88</sup> At times large quantities of luxury silk textiles were included among the objects crossing political and cultural boundaries in a two-way movement. Such was the case in 938, when Romanos I Lekapenos sent many types of plain and figured silks to Baghdad, described in the *Book of Gifts and Rarities*, among them the *siqlātūn* cloak decorated with elephants mentioned earlier.<sup>89</sup> The same work reports that the amir Nasir al-Dawlah sent numerous sumptuous silks to Emperor Romanos IV Diogenes during the period of his revolt against the Fāṭimid al-Mustansir in 1070/71.<sup>90</sup>

The claim that diplomatic exchanges of gifts, marital alliances, and booty taken in war acted as intermediaries of cross-cultural artistic interaction is not new. Yet, in addition to general observations made in recent years regarding the material value of diplomatic gifts, Anthony Cutler has strongly emphasized their economic context.<sup>91</sup> He points to the merchants occasionally traveling with them, attending or actively participating in events involving their exchange, and sometimes even delivering them.<sup>92</sup> More important, he argues that there was a consonance between various objects transferred as gifts and traded commodities, that both categories responded to a similar demand, and that the gifts themselves stimulated further demand and, ultimately, the production of goods.

<sup>86</sup> "Textiles in the Metropolitan Museum of Art," *BMMA* 53 (Winter 1995–96): 36, also published separately (New York, 1995).

<sup>87</sup> M. Martiniani-Reber, *Lyon, Musée historique des tissus. Soieries sassanides, coptes et byzantines, Ve–XIe siècles* (Paris, 1986), 111–13, no. 97.

<sup>88</sup> O. Grabar, "The Shared Culture of Objects," in H. Maguire, ed., *Byzantine Court Culture from 829 to 1204* (Washington, D.C., 1997), 125–29; R. Cormack, "But Is It Art?" in J. Shepard and S. Franklin, eds., *Byzantine Diplomacy. Papers from the Twenty-Fourth Spring Symposium of Byzantine Studies, Cambridge, March 1990* (Aldershot, 1992), 228–36, at 236, dwells on the role of artistic gifts in diplomatic exchanges; I. Bierman, "Inscribing the City: Fatimid Cairo," in *Islamische Textilkunst* (as above, note 23), 111–12, argues that in the public space the commodity value of gifts dominated their display value; same argument by P. Sanders, "Robes of Honor in Fatimid Egypt," in S. Gordon, ed., *Robes of Honor. The Medieval World of Investiture* (New York, 2001), 230–32. A. Cutler, "Gifts and Gift Exchange as Aspects of the Byzantine, Arab, and Related Economies," *DOP* 55 (2001): 245–51, offers a detailed discussion of these issues.

<sup>89</sup> *Book of Gifts and Rarities*, 100–101, §73.

<sup>90</sup> *Ibid.*, 116–17, §105.

<sup>91</sup> For what follows, see Cutler, "Gifts and Gift Exchange," 260–78.

<sup>92</sup> In this framework it is noteworthy that Byzantine diplomatic envoys sailing between Constantinople and Egypt seem to have mostly used ships engaging in commercial transportation. Alternatively, vessels sent on special missions took on board merchants and their goods, so as to cover partly or entirely the voyage's cost: see D. Jacoby, "Diplomacy, Trade, Shipping and Espionage between Byzantium and Egypt in the Twelfth Century," in C. Scholz and G. Makris, eds., *ΠΟΛΥΤΙΛΑΕΥΡΟΣ ΝΟΥΣ. Miscellanea für Peter Schreiner zu seinem 60. Geburtstag*, *ByzArch* 19 (Munich–Leipzig, 2000), 84–87, 100–101.

While basically correct, these propositions require several important qualifications with respect to silks. The direct artistic and industrial impact of foreign gifts exhibited at court was clearly limited to court workshops, such as those existing in Sasanian Persia, Byzantium, and the Muslim world, the latter called *khassa* or “exclusive” *ṭirāz*. These workshops either were ordered to reproduce, adopted, or developed ornamental elements borrowed from foreign silks or other objects.<sup>93</sup> Similar processes may be envisaged in the technical field. However, the appropriation of these elements was restricted to upper-grade silks manufactured by court establishments, the products of which, it should be stressed, were not intended for the open market.<sup>94</sup> These silks served the personal needs of the rulers or else were granted by them to members of their entourage as well as to state officials and holders of honorific titles, either as part of their salaries or as gifts, at annual ceremonies fulfilling political and symbolic functions or at other specific occasions. Sometimes Muslim rulers distributed in similar circumstances some of the foreign gifts they had received. The silks were bestowed upon the beneficiaries in the form of either fabrics or garments. In the Muslim world the *khilʿa* granted by rulers since the ninth century consisted of a robe of honor or several clothing items.<sup>95</sup> Robes of honor were made of either gold-interwoven, figured, or plain silk cloth, as attested by written sources and illustrated by twelfth- and thirteenth-century Islamic miniature paintings and ceramics.<sup>96</sup> Whether indigenous or foreign, the high quality of silks granted by rulers to members of the upper strata of society severely limited their circulation. This was the case even when the pieces were subsequently sold by the recipients, since only a fairly small circle of individuals belonging to the same social and economic strata had the means to purchase them.<sup>97</sup>

Enterprises outside court workshops provided yet another avenue for the artistic and industrial impact of high-grade foreign gifts. Both rulers’ courts and individual recipients of precious indigenous or foreign silks may have been induced to commission textiles

<sup>93</sup> Though outside the geographic and chronological range of this paper, a case in point is worth mentioning. After receiving a silk and gold textile from King Hormizd IV of Persia in 581, Emperor Wen-ti of China ordered an expatriate silk weaver from Samarkand to reproduce the fabric: see K. Otavsky, “Zur kunsthistorische Einordnung der Stoffe,” in K. Otavsky, ed., *Entlang der Seidenstrasse: Frühmittelalterliche Kunst zwischen Persien und China in der Abegg-Stiftung*, Riggisberger Berichte 6 (Riggisberg, 1998), 185.

<sup>94</sup> This was also the case of silks produced in the royal workshop of Palermo for the Norman court of Sicily: see Jacoby, “Silk in Western Byzantium” (as above, note 6), 463–65; idem, “Silk Crosses the Mediterranean,” 66–67.

<sup>95</sup> On Byzantium, see Jacoby, “Silk in Western Byzantium,” 488–90; N. Oikonomidès, “Title and Income at the Byzantine Court,” in *Byzantine Court Culture* (as above, note 88), 200–206, 210–12, who assumes that the regular imperial distributions of silks stopped under Alexios I Komnenos (1081–1118). On the beginning and spreading of *khilʿa* grants in Muslim courts, see D. Sourdel, “Robes of Honor in ‘Abbasid Baghdad during the Eighth to Eleventh Centuries,” in Gordon, *Robes of Honor* (as above, note 88), 138–45; Y. K. Stillman, “The Medieval Islamic Vestimentary System. Evolution and Consolidation,” in *Kommunikation zwischen Orient und Okzident. Alltag und Sachkultur*, SBWien 619 (Vienna, 1994), 293, 298–99; Sanders, “Robes of Honor in Fatimid Egypt,” 225–39. On robes of honor and silks in Fāṭimid ceremonial, see P. Sanders, *Ritual, Politics, and the City in Fatimid Cairo* (New York, 1994), 29–30, 83–119, passim. See also Cutler, “Gifts and Gift Exchange,” 260–61, and on “re-gifting” or the “recycling” of gifts, *ibid.*, 262–63; also idem, “Exchanges of Clothing in Byzantium and Islam: Asymmetrical Sources, Symmetrical Practices,” in *XXe Congrès International d’Études Byzantines, Pré-actes*, vol. 1 *Séances plénières* (Paris, 2001), 91–95.

<sup>96</sup> See Sanders, “Robes of Honor in Fatimid Egypt,” 231–33, who notes (229) that these robes “were at the site at which economies of prestige value and market value converged”; L. A. Mayer, *Mamluk Costume* (Geneva, 1952), 56–64. Depictions of robes in R. Ettinghausen, *Arab Painting* (Geneva, 1977), 65, 77, 97, 107, 114, 116, 118.

<sup>97</sup> On such sales, see below, note 104 and p. 219.

modeled after them in such enterprises. In Byzantium the imperial court ordered silks intended for its own consumption and for distribution from private weaving establishments, both in Constantinople and in provincial production centers, such as Thebes in the twelfth century. These silks were partly at least manufactured according to its own specifications. In addition, the Byzantine imperial court insured additional supplies for its needs by controlling and limiting the commercialization and especially the export of various categories of high-grade silks, as revealed by the early tenth-century *Book of the Eparch* for Constantinople and twelfth-century evidence for Thebes.<sup>98</sup> All this implies that there were no basic differences between imperial and private workshops with respect to the nature or quality of the silks they were capable of producing. Such was also the case in Muslim countries, in any event in Fāṭimid Egypt. The *ʿamma* or “public” *ṭirāz* workshops, controlled by government officials like the *khāṣṣa ṭirāz*, “exclusive” or court ateliers, wove silks intended both for the ruler’s court and the market in qualities similar to those produced by the latter.<sup>99</sup> Such was presumably also the case of strictly private workshops not subject to any supervision. In short, in both Byzantium and the Muslim world, court and other weaving enterprises equally produced silks bearing the imprint of high-grade diplomatic gifts and thereby acted as transmitters of artistic elements and channels of artistic interaction.

However, even within the restricted milieux of the social élites in which the impact of precious foreign presents was reflected in varying degrees, the demand for silks was primarily fueled by indigenous economic and social factors, namely, the accumulation of wealth, social status, a rise in standing, as well as the urge to display them in public. This tendency was common to all ranks of society. It was exhibited in fairly secluded court circles and especially in larger, open urban settings, in which daily encounters threatened to blur social and economic distinctions and the affirmation of status required specific signs. In other words, the general social climate of emulation prompted a demand for silks which expanded both horizontally within the upper ranks of society and vertically from the latter downward. On the other hand, the acquaintance with specific silks, even by hearsay, combined with economic considerations as well as cultural attitudes, determined to a large extent the particular nature and volume of that demand, as well as changes in taste and fashion. Only trade, whether domestic or across political and cultural boundaries, could satisfy that demand, which went well beyond the volume of silks granted at various levels of society.

The commercial diffusion of textiles in general and silks in particular was greatly enhanced by their very nature. Textiles are unbreakable and easily transported over long distances. They were thus eminently suited to serve as exchange commodities with which merchants could travel and, occasionally, pay for transportation or cover taxes and customs expenses.<sup>100</sup> Silks had the additional advantage of being lighter, of smaller volume, and of higher value than other textiles. As a result, they provided larger amounts of capital for purchases or barter and could insure larger profit margins.

<sup>98</sup> See Jacoby, “Silk in Western Byzantium,” 488–92.

<sup>99</sup> On the two types of *ṭirāz*, see Serjeant, *Islamic Textiles*, 143–44; Baker, *Islamic Textiles*, 55–56; Shatzmiller, *Labour in the Medieval Islamic World*, 243–47; J. A. Sokoly, “Towards a Model of Early Islamic Textile Institutions in Egypt,” in *Islamische Textilkunst* (as above, note 23), 115–22, esp. 116 and 120, who also dwells on weaves and quality.

<sup>100</sup> A Geniza letter of ca. 1130 mentions robes made of an Indian fabric, which were specifically taken on a maritime voyage for this last purpose: S. D. Goitein, trans., *Letters of Medieval Jewish Traders* (Princeton, 1973), 181–85, esp. 184, sec. C. See also Goitein, *A Mediterranean Society*, 1:122, 4:464 n. 248.

Whatever the function of demand, the diffusion of silks must also be viewed from the supply side of the marketplace. Indeed, merchants, entrepreneurs, and manufacturers fulfilled a major function in the stimulation of demand, the circulation of silks, and, indirectly, in artistic interaction, far more than foreign gifts. Their role warrants a few observations. In certain circumstances the commercial import of foreign silk textiles and garments threatened to narrow their market outlets. In order to meet that challenge they resorted to the production of imitations. The appropriation of foreign visual or technical elements could be a business success only if sustained in one of three ways. One of these was better quality at the same price level, another lower pricing for the same type of fabric. Finally, a downscaling in the quality and price of textiles based upon or inspired by foreign as well as indigenous luxury objects could attract customers positioned at lower ranks of society, whose purchasing power was more limited than at the level of the social élite. Clearly, an increase in the variety of products insured a broader circle of consumers. The diffusion of imitations and downscaled silks was not necessarily restricted to the domestic clientele and could be extended to foreign countries. The various market mechanisms involved in the operations of suppliers and the complex artistic and technological interaction they promoted, both within the same cultural framework and beyond cultural boundaries, are amply illustrated in Byzantium, the Muslim world, and the Christian West.

Yet, before offering some concrete examples, a few remarks about the practical aspects of downscaling are in order. Downscaling could be achieved by the blending of silk with other fibers, less sophisticated weaving, simpler ornamental patterns, the replacement of woven by embroidered designs, dyeing with cheaper colorants, and, ultimately, the production of plain monochrome or undyed silks or half-silks of poor quality only faintly reflecting the luxury objects from which they derived. Some of these devices have already been considered, and two simple pieces with a minimal amount of silk, manufactured in Egypt at the turn of the eleventh century, duly illustrate the entire process.<sup>101</sup> In short, borrowings from luxury items, whether domestic or foreign ones obtained by trade or received as gifts, were gradually restricted, diluted, or blurred. As a last resort, they were even omitted.

The downscaling of products was a broad phenomenon also deriving from social factors, including the granting of silks to individuals at lower ranks of society. Both in Byzantium and in the Muslim world the textiles offered by rulers to their subjects reflected the rank of the recipients in the state or social hierarchy. As a result, the quality and volume of the fabrics gradually diminished with the decreasing standing of the beneficiary. In Mamlūk Egypt the rulers even replaced silken robes of honor by robes woven of other materials at the lowest echelons of the state hierarchy.<sup>102</sup> A similar process of downscaling is perceptible in the evolution of robes of honor and *ṭirāz* bands in Muslim countries. Some dignitaries and other members of the social élite offered to their servants items of clothing as gifts or else as part or in lieu of wages. The granting of robes of honor also spread among members of the middle class.<sup>103</sup> Both these practices clearly involved medium- and

<sup>101</sup> They are preserved at the Metropolitan Museum of Art in New York (acc. Nos. 1974.112.14a and 1974.113.14b); see Ettinghausen et al., *Islamic Art and Architecture*, 320 n. 101.

<sup>102</sup> See Mayer, *Mamluk Costume*, 56–64.

<sup>103</sup> See Serjeant, *Islamic Textiles*, 22; Stillman, "The Medieval Islamic Vestimentary System," 293; Sanders, "Robes of Honor in Fatimid Egypt," 233.



lower-grade textiles, cheaper and more abundant than luxury products on the open market.<sup>104</sup> Turning to *ṭirāz* bands, we have noted that they originally decorated robes of honor granted by rulers, whose name they generally displayed. However, side by side with the traditional use, they became fashionable within larger and lower-ranking sectors of society, were also applied on private clothing, and appeared on various pieces other than robes. The inscriptions were shortened, became more conventional, omitted the names of rulers; even ordinary people ordered their own names to be displayed on them, or the script was replaced by ornamental elements. In addition, in the late twelfth and early thirteenth century the middle classes began to replace the gold thread originally used in *ṭirāz* bands with yellow silk.<sup>105</sup> In short, *ṭirāz* bands evolved from official to private and, ultimately, to purely anonymous pronouncements produced on a large scale.

We may now proceed to the connection between diffusion and imitation of silks. Despite the disintegration of the vast 'Abbāsid state in the tenth century and its internal political divisions, the Muslim world remained a cultural entity with a common communication network, which furthered the circulation of commodities, peoples, ideas, and technology.<sup>106</sup> These factors account for the intense artistic and technological interaction occurring between various Muslim regions. With respect to silks this is clearly illustrated by the widespread appropriation and imitation of silk designs and weaves at places other than those at which they had been originally devised and produced. I have already noted that in such cases geographic names pointing to origin became generic terms defining the nature of the textiles.<sup>107</sup> It will suffice to illustrate this development by one example. Silk production in Muslim Spain was strongly influenced by the Muslim Middle East, as evidenced by silk weaving in Almería in the Almoravid period, before the fall of the city to King Alfonso VII of León and Castile in 1147. According to the geographer al-Idrīsī, the city manufactured imitations of Iraqi and Persian silks, namely, *ṭattābī*, a taffeta fabric made of silk and cotton originally produced in Attabiya, a district of Baghdad, as well as *isfahānī* and *jurjānī* silks, respectively named after the city of Isfahan, Persia, and the province of Jurjān, southeast of the Caspian Sea. The same types of silk cloth continued to be manufactured at Almería at a later period.<sup>108</sup> Some Spanish workshops also copied Baghdadi

<sup>104</sup> E. Ashtor, *Histoire des prix et des salaires dans l'Orient médiéval* (Paris, 1969), 166, did not take these practices into account when he speculated that the appearance of robes of honor in Geniza trousseaux of the 12th century resulted from the sale of garments by dismissed officials. Such sales obviously occurred. According to Sanders (*Ritual, Politics, and the City*, 30), a large number of textiles originally manufactured for the Egyptian court were sold in the 1060s, during the period of drought and famine under the caliph al-Mustansir, and as a result circulated in the open market. However, these cases were rather exceptional and do not explain the spreading of silk grants as a broad social phenomenon, nor the change in the nature of *ṭirāz* bands mentioned below.

<sup>105</sup> See B. Shoshan, "On Costume and Social History in Medieval Islam," in B. Z. Kedar and A. L. Udovitch, eds., *The Medieval Levant. Studies in Memory of Eliyahu Ashtor (1914–1984)* = *Asian and African Studies* 22 (1988): 39–40; S. Blair, "Inscriptions on Medieval Islamic Silks," in *Islamische Textilkunst* (as above, note 23), 95–104. Some Egyptian Jews had garments embroidered with their name or with biblical verses in Hebrew script: Goitein, *A Mediterranean Society*, 4: 197–98. On the use of yellow silk, see V. Gervers, "Rags to Riches: Medieval Islamic Textiles," *Rotunda* 11 (1978/79): 26.

<sup>106</sup> See J. O. Voll, "Islam as a Special World System," *Journal of World History* 5 (1994): 213–26.

<sup>107</sup> See above, pp. 201–2.

<sup>108</sup> Al-Idrīsī, *Nuzhat al-Mushtāq fi khtirāq al-Āfāq* (*Description de l'Afrique et de l'Espagne par Edrisi*), ed. and trans. R. Dozy and M. J. De Goeje (Leiden, 1866), text 197, French trans. 239–40. For other authors possibly deriving their information from al-Idrīsī, see Serjeant, *Islamic Textiles*, 169–70; also Lagardère, "Le ver à soie en

ornamental designs. However, technical features and palaeographic details reveal that two taffeta pieces bearing inscriptions in which Baghdad is claimed to be the city of origin were actually manufactured in Spain, presumably in Almería, in the first half of the twelfth century. The fame of the city's silk fabrics is reflected by twelfth- and thirteenth-century French and German epic literature.<sup>109</sup>

A second stage of imitations, built upon the previous one that involved "Baghdadi" silks, appears to have occurred in Italian workshops. By the mid-twelfth century Genoa was importing *panni de Bagadello*, a generic name for genuine Baghdadi or Iraqi silks, as well as fabrics from Muslim Spain, some of which were presumably imitations of these fabrics. The two categories of textiles must have been well known in Lucca, the only major Italian silk center of the twelfth century, which used Genoa as main transit station for its imports of raw materials and the maritime diffusion of its silks. In 1201 some *bagadelli hispanici* or "Spanish Baghdadi silks" were shipped from Genoa to Ceuta, a city located on the African coast south of Spain, across the Straits of Gibraltar. Another shipment of *bagadelli*, presumably of the same type though not called "Spanish," left Genoa for Ceuta somewhat earlier, in 1197. It seems unlikely that these silks should have traveled all the way from Spain to Genoa, before being reexported to Ceuta. We may assume, therefore, that these were imitations of Spanish *bagadelli* produced in Lucca. It is noteworthy that around the time Genoa was exporting *bagadelli hispanici* to Ceuta it also shipped plain as well as gold or silver-interwoven sendals manufactured in Lucca to Castile, where these fabrics had to compete with Islamic silks produced in Murcia, as attested by a list of maximum prices issued in 1207 by King Alfonso VIII at the *Cortes* of Toledo. One may surmise, therefore, that some if not all of these Lucchese fabrics were also imitations of Islamic textiles.<sup>110</sup>

Diffusion and imitation were also tightly connected within the pattern of silk exchanges between Byzantium and the Muslim Middle East. The renown and diffusion of Byzantine silks in the various strata of Muslim urban society, including in cities far removed from princely courts, were primarily promoted by trade. In a satire of the eighth or ninth century an anonymous author from Baghdad mocked the inhabitants of Isfahan, Iran, for not owning a certain type of Byzantine silk fabric.<sup>111</sup> The early tenth-century geographer Ibn al-Faqīh specifically mentions silk and gold textiles among the articles imported by Muslim merchants from the empire. Other tenth-century authors refer to Trebizond, visited by Muslim merchants, as the main market channeling Byzantine silks into

Andalus," 99. On the original products, see Serjeant, *Islamic Textiles*, 28–29 (*ʿattābī*), 83–84 (*isfāhānī*), 80–81, 89, 105 (*jurjānī*). On the nature of *ʿattābī*, see Lombard, *Les textiles dans le monde musulman*, 246.

<sup>109</sup> See F. E. Day, "The Inscription of the Boston 'Baghdad' Silk," *Ars Orientalis* 1 (1954): 191–94; F. L. May, *Silk Textiles of Spain. Eighth to Fifteenth Century* (New York, 1957), 11–13, with references to contemporary French literature, 36, 67; L. von Wilckens, *Die textilen Künste. Von der Spätantike bis um 1500* (Munich, 1991), 74–75, on German epic poetry of the 12th and early 13th centuries and the attribution of a silk to the city; C. Partearroyo, "Almoravid and Almohad Textiles," in J. D. Dodds, ed., *Al-Andalus. The Art of Islamic Spain* (New York, 1992), 105–9, 318–22; O. R. Constable, *Trade and Traders in Muslim Spain. The Commercial Realignment of the Iberian Peninsula, 900–1500* (Cambridge, 1994), 145–46, 173–81; Ettinghausen et al., *Islamic Art and Architecture*, 243, 281–82, and 280, figs. 458–59.

<sup>110</sup> For 1201: Genoa, Archivio di Stato, Cartolari Notarili, no. 102, fol. 209v; for 1197: G. Jehel, *Les Génois en Méditerranée occidentale (fin XIème-début XIVème siècle). Ébauche d'une stratégie pour un empire* (Amiens-Paris, 1993), 137. For the background, see Jacoby, "Genoa, Silk Trade and Silk Manufacture," 14–16, 39. On sendal, see below, note 128.

<sup>111</sup> Serjeant, *Islamic Textiles*, 212.

eastern Muslim countries.<sup>112</sup> The treaty concluded in 969/70 between Byzantium and Aleppo mentions two types of “Rūmī” or Byzantine fabrics, *dībāj* and *sundus*, as well as unworked silk imported into the Syrian emirate. These goods were partly handled by Byzantine merchants, as implied by the treaty’s reference to Byzantine caravans.<sup>113</sup>

In the mid-eleventh century a famous physician living in Damascus is supposed to have owned a large number of Byzantine silks, some 300 gold brocades and 501 silver brocades.<sup>114</sup> These figures may be dismissed as purely anecdotal. They nevertheless illustrate the prestige of Byzantine luxury silks in the Muslim Middle East and convey a sense of the resources spent by some members of the upper middle class of that region in their acquisition. As attested by dowries recorded in the Geniza documents, the hoarding of silks was also customary among Jewish families of lower social rank in Egypt.<sup>115</sup> We may safely assume that such was also the case in the Muslim and Christian communities. Hoarding was also common in Byzantium, where members of the social élite retained silks received from the emperor or immobilized part of their liquid capital in the purchase of other pieces, among them foreign ones.<sup>116</sup> Although not documented, it is likely that in the empire, as in the Muslim world, the hoarding of silk textiles and garments, including foreign ones, was limited neither to rulers nor to individuals belonging to the upper strata of society. Stored silk fabrics and garments were assets that could be fairly easily converted into cash in case of emergency, misfortune, or disgrace. Indeed, in Egypt silks received as gifts from the caliphs were occasionally sold, as noted earlier, and the same is implied by a regulation of the *Book of the Eparch* with respect to imperial gifts in Constantinople.<sup>117</sup> It follows that both in Muslim and Byzantine society conspicuous consumption was not the only incentive to investment in silks.

In addition to the commercial transfer of silk fabrics and clothing items from Byzantium to eastern Muslim countries, there was also an unrestricted movement of them in the opposite direction. Although less documented, this movement must have been continuous. Silk fabrics and “Baghdadi” silk garments were included among the “Saracen” goods brought by Syrian merchants to Constantinople in the early tenth century. The widely differentiated nature and quality of the imported goods responded to a variegated demand.<sup>118</sup> This is also illustrated by the constraints imposed upon visiting Bulgarian merchants, who in the purchase of Islamic silks were limited to those sold for 6 nomismata or

<sup>112</sup> Ibid., 63, 213.

<sup>113</sup> Text in Kamāl al-Dīn Ibn al-ʿAdīm, *Zubdat al-Ḥalab min taʾrīkh Ḥalab*, ed. S. Zakkar, 2 vols. (Damascus, 1997), 1:167–68; French trans. M. Canard, *Histoire de la dynastie des Hʾamdanides de Jazīra et de Syrie*, Publications de la Faculté des Lettres d’Alger, ser. 2, 21 (Algiers, 1951), 833–36, esp. 835, §20; English trans. W. Farag, *The Truce of Safar A.H. 359, December–January 969–970*, Eleventh Spring Symposium (Birmingham, 1977), 2–5, esp. 4, §20. On *sundus*, see below, note 128.

<sup>114</sup> Th. Bianquis, “Notables ou malandrins d’origine rurale à Damas à l’époque fatimide,” *BEODam* 26 (1973): 207 (French trans.).

<sup>115</sup> See Stillman, “The Medieval Islamic Vestimentary System,” 299–300; Goitein, *A Mediterranean Society*, 4:131, 184–86.

<sup>116</sup> Byzantine hoarding including luxury silks: M. F. Hendy, *Studies in the Byzantine Monetary Economy, c. 300–1450* (Cambridge, 1985), 209–20; J.-Cl. Cheynet, “Fortune et puissance de l’aristocratie (Xe–XIIe siècle),” in V. Kravari, J. Lefort, and C. Morrisson, eds., *Hommes et richesses dans l’Empire byzantin*, 2 vols. (Paris, 1989–91), 2:199–213. On the purchase of foreign silks, see below, and note 119.

<sup>117</sup> For Egypt, see above, note 104; for Byzantium: *EB* 4.2, ed. Koder, 92.

<sup>118</sup> *EB* 5.1, 5.2, and esp. 5.4 for quality, ed. Koder, 94.

less, which implies that at least some of those acquired by members of the city's social élite for their own household were of costlier types.<sup>119</sup> The import of Islamic silks to Constantinople is also attested for the reign of Constantine VII Porphyrogennetos (945–959). It included *mulham*, the high-grade half-silk already mentioned.<sup>120</sup> The imperial court purchased then on the market good-quality Egyptian silk garments intended for distribution to foreigners, clearly familiar with them and likely to appreciate such gifts.<sup>121</sup> Yet other vestments of the same imported types were clearly bought by private Byzantine individuals. On the other hand, the garments “tailored in the Saracen style” were definitely made in the empire itself and point to the adoption of Islamic fashion in some instances.<sup>122</sup> This was also the case with Islamic *tirāz* bands, with which the Byzantines were well acquainted. They appear in various Byzantine depictions, some with pseudo-kufic inscriptions, and on an extant silk cloth ascribed to the twelfth century.<sup>123</sup> The impact of Islamic fashions is further illustrated in the first half of the thirteenth century in the Greek Empire of Nicaea. About 1243 John III Vatatzes prohibited the wearing of clothes made of foreign silk textiles, among them multicolored fabrics imported from Muslim countries, “Assyria” and “Babylonia,” and imposed upon his subjects the exclusive use of indigenous silks for that purpose. During the reign of Andronikos III (1328–41) members of the social élite displayed both at the imperial court and elsewhere hats and other pieces of clothing of foreign origin or inspired by foreign fashion, some of which were being imported from the Middle East.<sup>124</sup> This development was partly connected with a broader phenomenon. The Palaiologan period witnessed the adoption and even predominance of Oriental costume at the expense of traditional outfits at the imperial court and among the social élite.<sup>125</sup>

<sup>119</sup> *EB* 5.2 and 5.4 (*archontes*), 9.6 (Bulgars), ed. Koder, 94–96 and 108, respectively. *Blattia* in the last paragraph means “silk fabrics,” not “Purpurkleider” as translated by Koder, *ibid.*, 109. On the semantic evolution of this term, see Jacoby, “Silk in Western Byzantium,” 458 n. 29. As attested by the Geniza documents, “Baghdadi” robes, gowns, cloaks, capes, and other pieces of clothing were also sold in Cairo; around 1135 a “Baghdadi” cape was even sent from there to Spain: see Goitein, *A Mediterranean Society*, 4:191.

<sup>120</sup> *De ceremoniis* 2.18, ed. Reiske 1:607, line 10: ἀνὰ μολχαμίου βηλαρίου α'; line 11: ἀνὰ μολχαμίου. E. Trapp, ed., *Lexikon zur byzantinischen Gräzität besonders des 9.–12. Jahrhunderts*, Veröffentlichungen der Kommission für Byzantinistik 6 (Vienna, 1994–), 1:276, defines βηλαρίον as cloth. It was presumably a thin textile, similar to the Spanish veils mentioned above, p. 199. The first reference above is to cloth, the second probably to a garment made of the same material. On *mulham*, see above, p. 209.

<sup>121</sup> This is one more reason for identifying these pieces as imports, despite some doubts expressed in this respect. See Constantine Porphyrogennetos, *Three Treatises on Imperial Expeditions*, ed. and trans. J. Haldon, CFHB 28 (Vienna, 1990), 110, lines 241–42, 112, lines 289–90 and 293–94; commentaries *ibid.*, 223 and 230. Haldon, *ibid.*, 113, mistranslates “garments of Egyptian silk.” Further evidence is included in the treatise of Constantine VII entitled *De ceremoniis* 2.18 and 45, ed. Reiske, respectively 1:607, lines 10, 12, and 678, lines 3, 7, in the latter case correctly translated by Haldon as Egyptian garments and leggings: see his “Theory and Practice,” 234, lines 241 and 249. Note the importance attached to silk garments, clearly Islamic, next to gold and silver pieces and aromatics, as one of three components of the booty collected by John Tzimiskes during his Mesopotamian campaign of the early 970s: Leo Diaconus, *Historia* 10.2, ed. C. Hase (Bonn, 1828), 163, lines 1–7.

<sup>122</sup> *De ceremoniis* 2.45, ed. Reiske, 1:677, line 20: κατὰ Σαρακηνούς; trans. Haldon, “Theory and Practice,” 232, line 236.

<sup>123</sup> See Parani, *Reconstructing the Reality of Images*, 54; Cornu and Martiniani-Reber, “Étoffes et vêtements,” 51–53, and for the cloth esp. 52 n. 35.

<sup>124</sup> For the reign of John III: Nikephoros Gregoras, *Byzantina Historia* 2.6.4, ed. L. Schopen and I. Bekker, 3 vols. (Bonn, 1829–55), 1:43, line 15–44, line 6; for the reign of Andronikos III: 11.11.8 and 37.47–48, respectively *ibid.*, 1:567–68 and 3:555–56. On masculine hats, some if not all silk-covered, see Parani, *Reconstructing the Reality of Images*, 68–71, who fails, however, to distinguish between imports and imitations.

<sup>125</sup> *Ibid.*, 231–32.

The interaction between the empire and Muslim countries was not limited to ornamental features and fashion in clothing, of which some instances are noted above. It also extended to silk technology. High demand stimulated by the diffusion of silks also provided an incentive to borrowings and imitation in that field. Since the ninth century at the latest the empire produced a lightweight silk cloth in tabby weave imitating or closely resembling a fabric manufactured in the Muslim East. As attested by a Byzantine author, Greek *sendes* was derived from Arabic *sundus*.<sup>126</sup> The *Book of Gifts and Rarities* reports that Byzantine *sundus* was included among the presents sent by Emperors Romanos I Lekapenos and Constantine IX Monomachos to Muslim rulers in 938 and 1045, respectively. It describes the decoration of the figured pieces in the first of these instances, which implies that plain *sundus* was also being produced.<sup>127</sup> The treaty of 969/70 between the empire and Aleppo, noted earlier, as well as other Arabic sources mention Byzantine *sundus* as a commercial export item to the Muslim Middle East.<sup>128</sup>

Borrowings and imitations in weaves and technology were not one-sided and also occurred in the opposite direction. While the countries of the Muslim Middle East continued to acquire Byzantine silks, their highly skilled workshops also imitated them. A suggestive Arabic trade manual of the second half of the ninth century describes *abu qalamun* as a “Rūmī regal tapestry” with a particular sheen having a red background and violet stripes crossed with red and green. “They say that it changes its color with the ascendant of the day and the glare of the sun. It is very expensive.”<sup>129</sup> The Persian author Nāṣir-i Khusrau reports in his *Safarnāma* or *Book of Travels* that this multicolored silk fabric of Byzantine origin was being manufactured in Tinnis, Egypt, which he visited in 1047.<sup>130</sup> By 1037 Tustar, a city in Khuzistan north of the Persian Gulf, had become famous for its so-called “Rūmī” or “Byzantine” silk and gold textiles.<sup>131</sup> The dowries of Jewish brides in Egypt recorded in Geniza documents of the tenth to twelfth centuries often include one or several “Rūmī” kerchiefs or scarves (*mandīl*, plur. *manādīl*) and “Rūmī” silks. The kerchiefs

<sup>126</sup> Theophanes Continuatus, *Vita Basilii* 5.74, ed. I. Bekker (Bonn, 1838), 318, lines 13–15. See Jacoby, “Silk in Western Byzantium,” 458–60, esp. nn. 32 and 37 for the derivation of the name from Arabic and for the cloth. See also below, note 128.

<sup>127</sup> *Book of Gifts and Rarities*, 101, §73 and 109, §82.

<sup>128</sup> Serjeant, *Islamic Textiles*, 56, 63, 158, 159, has misinterpreted the reference to a piece of green gold-embroidered *sundus* as a definition of the fabric, which he considers to be a green brocade. The recent translator of the *Book of Gifts and Rarities* (see above, note 83), 437, speaks of a thin brocade. However, the treaty of 969/70, on which see above, note 113, distinguishes between *sundus* and brocade and various sources mention colors other than green; see for instance the description of *sundus* in the first list of gifts mentioned above, note 127. *Sendes/sundus* (Latin *celandum* and other versions, English sendal, French *celand*, Italian *zendado*) was a lightweight cloth in tabby weave: see D. King, “Types of Silk Cloth Used in England 1200–1500,” in Cavaciocchi, *La seta in Europa* (as above, note 23), 458–59.

<sup>129</sup> C. Pellat, “Ġahiziana, I. Le *Kitāb al-tabaṣṣur bi-l-tiġāra* attribué à Ġahiz,” *Arabica* 1 (1954): 158, provides a more accurate translation than Serjeant, *Islamic Textiles*, 143. For the dating of this text, see A. Miquel, *La géographie du monde musulman jusqu’au milieu du 11e siècle*, 4 vols. (Paris–La Haye, 1967–88), 1: 110–11, 332–33. *Abu qalamūn* appears to derive from Greek ὑποκάλαμον, “striped” cloth: R. Dozy, *Supplément aux dictionnaires arabes*, 2d ed. (Paris, 1927), 1:9; Lombard, *Les textiles dans le monde musulman*, 244–45. See also *EP*<sup>2</sup>, 1:131, s.v. “Abu Ḳalamūn.” The textile was used for curtains: see Olszowsky-Schlanger, *Karaite Marriage Documents*, 236. A 9th- or 10th-century fabric woven of six colors of silk, with extensive use of red- and yellow-gold threads, has been tentatively identified as *buqalamūn*: see Baker, *Islamic Textiles*, 34–35. This seems rather unlikely, since the cloth lacks both the striped pattern and the color scheme described by the literary source just mentioned.

<sup>130</sup> Nāṣir-e Khosraw’s *Book of Travels* (*Safarnāma*), trans. W. M. Thackston, Jr. (Albany, N.Y., 1986), 39.

<sup>131</sup> See Serjeant, *Islamic Textiles*, 43.

varied widely in quality and cash value.<sup>132</sup> Only prices may provide some clue as to whether they were all-silks, half-silks, or made of other material. The weaving pattern and the presence or absence of decoration also determined their price.<sup>133</sup> It seems impossible, however, to ascertain whether they were genuine Byzantine products or Egyptian imitations. Similarly, it is impossible to determine whether a “Rūmī” or Byzantine bathrobe of silk attested ca. 1100 or the *rūmiyya* recorded in Geniza trousseaux were imported from Byzantium or produced in a Muslim country.<sup>134</sup> However, one such item of clothing attested ca. 1230 must have been indigenous, since it was made “in the Yemenite fashion.”<sup>135</sup> Interestingly, according to an undated letter possibly of the eleventh century, a Jewish woman who had emigrated from Byzantium made “Byzantine” garments at an undisclosed location in Egypt or Palestine.<sup>136</sup> The evidence just adduced reveals that the intrusion of Byzantine fashion into the Muslim world was not limited to silk fabrics and included also clothing items. Incidentally, the production of relatively cheap *manādīl* confirms the downscaling of luxury products aimed at a wider diffusion.<sup>137</sup>

Since textiles were easily transportable, they were the primary agents of artistic transfers in the field of imagery. Yet the borrowing of motifs, patterns, and ornamental compositions did not necessarily require the physical transfer of fabrics, nor even the movement of craftsmen. These elements could also be transmitted by other artistic media, namely, portable artifacts made of brass, gold, silver, glass, or ceramics, manuscripts, as well as drawings and sketches, including those of static pieces of architecture and sculpture.<sup>138</sup> The incentive to borrow varied. In the rulers’ courts the appropriation of foreign orna-

<sup>132</sup> See Goitein, *A Mediterranean Society*, 1:46, 4:167, 191, 315, 320, 329–30. *Mandīl al-wajh* designated a face veil; on this and other such items, see also Olszowsky-Schlanger, *Karaite Marriage Documents*, 225. Goitein wrongly assumed that, based upon Spanish *mantilla*, the root of *mandīl* was western and that the “Rūmī” *mandīl* was a western product or a replica of it. In fact, however, the Arabic term derived from Byzantine *μαντήλα* or *μαντήλι*: see E. Kriaras, *Λεξικὸ τῆς Μεσαιωνικῆς Ἑλληνικῆς Δημόδοις Γραμματείας, 1100–1669* (Thessalonike, 1968–90), 9:333–34. To be sure, in the period examined here “Rūm” was applied both to Byzantines and western Christians: see D. Jacoby, “Byzantine Trade with Egypt from the Mid-Tenth Century to the Fourth Crusade,” *Thesaurismata* 30 (2000): 27–29. Yet the well-documented context of imports of Byzantine textiles into the Muslim Middle East clearly points to the Byzantine origin of fabrics and clothing items called “Rūmī,” all the more so since western imports are not recorded before 1283, when the Senate of Venice authorized the shipment of Venetian samites to Alexandria: R. Cessi, ed., *Deliberazioni del Maggior Consiglio di Venezia*, 3 vols. (Bologna, 1931–50), 3:32–33, §76.

<sup>133</sup> The Egyptian city of Tinnis produced a “Rūmī” *mandīl* made of high-grade linen: see Goitein, *A Mediterranean Society*, 4:167, 191. *Manādīl* or kerchiefs “with borders,” apparently with decorated bands, were included among the gifts sent by Romanos I Lekapenos to Caliph al-Rādī in 938: *Book of Gifts and Rarities*, 101, §73. On costly and decorated kerchiefs, see Baker, *Islamic Textiles*, 41. Kerchiefs were also included in 1022 in the trousseau of a Jewish bride of Byzantine Asia Minor, already mentioned above: see Jacoby, “What Do We Learn about Byzantine Asia Minor,” 85.

<sup>134</sup> On the bathrobe, see Goitein, *A Mediterranean Society*, 4:415–16 n. 311 and 452 n. 36. The name *rūmiyya* clearly points to a Byzantine origin, yet the precise nature of that piece of clothing is unknown: see Stillman, “The Medieval Islamic Vestimentary System,” 295. Evidence in Goitein, *A Mediterranean Society*, 4:191, 323, 324. Goitein wrongly assumed that both were “European,” i.e., of western origin or in western style, yet see above, note 132.

<sup>135</sup> *Ibid.*, 4:191–92 and 415 n. 310.

<sup>136</sup> Ed. Z. Falk, “From the Cairo Genizah,” *Sinai* 85 (1979): 147–48 (Hebrew); reference to the document in Goitein, *A Mediterranean Society*, 4:236.

<sup>137</sup> On this process, see above, pp. 216–17.

<sup>138</sup> On the exchange of motifs and ornamental patterns between textiles and other artistic media, see L. W. Mackie, “Toward an Understanding of Mamluk Silks: National and International Considerations,” *Muqarnas* 2 (1984): 143–44; Ettinghausen, as above, note 52; and below, note 195.

mental elements depended upon the latter's symbolic or ideological content or the one ascribed to them, as illustrated by royal motifs and iconography,<sup>139</sup> provided the message they conveyed was not offensive, whether in the political or religious sphere. It is clear, though, that in addition there also were aesthetic considerations. On the other hand, purely economic calculations determined borrowings and imitation of ornamental features when silks were produced for the open market.

The conditions enabling or furthering borrowings and transfers of technology differed from those governing visual elements. There can be no doubt that experienced medieval weavers examining a cloth could identify the nature of the threads used and determine whether they dealt with an all-silk or a mixed fabric. Moreover, one should not underestimate their ability to determine the nature of the weaving process and, with or without the help of merchants who had visited foreign silk workshops and the use of sketches, devise the construction of adequate looms and reproduce these textiles.<sup>140</sup> Such a process may have indeed occurred in the thirteenth century. Around 1240 some Genoese merchants were acting as entrepreneurs in Thebes, where they financed the activity of specific silk workshops. They must have acquired thereby an intimate knowledge of the technical aspects of local silk weaving, since they had ample opportunity to observe artisans at work and examine their implements and products. So far no extant silks have been identified as Theban products, as noted earlier, and it is impossible, therefore, to detect the transfer of silk technology from Thebes to other silk centers. However, one cannot rule out the possibility that Genoese merchants generated such a transfer, since many of them had a vested interest in the promotion of silk workshops in Lucca. The probability that such a process indeed took place is also suggested by what appears to be a growing diversion of Genoese investments from the support of Theban workshops to the supply of raw materials to Lucca in the second half of the thirteenth century.<sup>141</sup>

It is clear, however, that visual and especially technological borrowings were partly the result of labor mobility, whether spontaneous in response to economic incentives or pressures or else enforced by deportation and compulsory resettlement. Skilled artisans joining a workshop or establishing a new one after migrating either integrated within the existing production structures and adjusted to local patterns of production, or else innovated by introducing new ornamental elements, manufacturing implements, and weaving techniques. Alternatively, they could supply reliable information for the construction of such implements and contribute their expertise to the latter's operation, maintenance, and repair. They must also have trained indigenous artisans, or else these became familiar with the ornamental elements and techniques imported by the newcomers. Such a process is indeed documented for Sicily after 1147, as we shall see below.

The introduction of new skills was especially important in the field of dyeing, in view of the high degree of specialization in that craft. In Muslim countries different terms applied to each group of dye makers, dye sellers, and dyers according to the coloring agents they utilized.<sup>142</sup> Dyers generally used well-tested recipes. Blunders could be costly, considering

<sup>139</sup> Some of which are mentioned above, pp. 212–13.

<sup>140</sup> For a case in point, see above, note 93.

<sup>141</sup> See Jacoby, "Genoa, Silk Trade and Silk Manufacture," 29–31, 37–39.

<sup>142</sup> Evidence for Egypt in Goitein, *A Mediterranean Society*, 1: 106–7, and for the terms, see Shatzmiller, *Labour in the Medieval Islamic World*, 119–23, 243. See also above, p. 210, and for specialization in Italy, below, note 144.

the price of the colorants and the value of the badly colored or damaged fabric. This was experienced around 1090 by a Jewish dyer working in a private Byzantine workshop, who spoiled a high-grade silk cloth entrusted to him.<sup>143</sup> Occasionally dyers conducted experiments with colorants. Yet, in contrast to weavers, even the most astute and experienced among them could not securely identify nor quantify the various ingredients involved in the dyeing of the silks they examined, as generally achieved by modern scientific analysis. A case in point from the late fourteenth century is worth mentioning. At that time the dyeing of silks with cochineal, the crimson or purple-red colorant mentioned earlier, was a well-guarded secret in Venice known to only a few experts. A dyer unfamiliar with the process sent his son to acquire the technical know-how in Constantinople, yet the latter did not find there, nor in the Black Sea port of Caffa, anyone capable or willing to share his expertise with him. He traveled some 700 Venetian miles farther and eventually succeeded in obtaining it at an undisclosed location, presumably in Armenia.<sup>144</sup> In 1393 he returned to Venice with around 3,000 Venetian pounds or some 903 kg of cochineal.<sup>145</sup> This fairly large quantity would have been sufficient for the dyeing of silk weighing between some 215 and 500 Venetian pounds, or from around 64 to 150 kg, depending upon the recipe used.<sup>146</sup>

Individual and spontaneous labor mobility was not confined to craftsmen moving between closely located workshops or manufacturing centers. It also occurred over long distances within the same political or cultural entity, yet is generally difficult to trace and often can be inferred only from subsequent developments. The widespread imitation of silk types within the Muslim world, already mentioned, must have been achieved partly as a result of the migration of highly skilled labor. As noted above, the common culture shared by the Muslim world furthered geographic mobility, yet the proportion of skilled workers among the migrants cannot be evaluated for lack of sufficient data.<sup>147</sup> In addition to economic inducements, various pressures sometimes contributed to migration. From the Geniza documents we know that the eleventh- and twelfth-century political and economic dislocation in Syria and Palestine prompted fairly large numbers of Jewish silk workers to settle in Egypt, to the extent that indigenous Jewish artisans in that country complained about competition from the newcomers.<sup>148</sup> We may safely assume that this migration and the ensuing problem were not limited to Jewish silk workers. In Byzantium the launching of high-grade silk manufacture in Thebes in the eleventh century supposes the arrival of first-rate weavers, who either joined existing workshops or established new ones. In all likelihood they came from other Byzantine silk centers, in response to the economic incentives offered by various *archontes* of Thebes acting as entrepreneurs. The weavers either brought along drawlooms enabling pattern weaving or devised their construction in

<sup>143</sup> See Jacoby, "Silk in Western Byzantium," 482 n. 169, based on a new reading of the relevant Geniza document.

<sup>144</sup> See L. Molà, *La comunità dei Lucchesi a Venezia. Immigrazione e industria della seta nel tardo medioevo*, Istituto Veneto di Scienze, Lettere ed Arti. Memorie, Classe di Scienze Morali, Lettere ed Arti 53 (Venice, 1994), 159–60, who assumes that the dyer acquired the expertise in Persia; yet Christian Armenia, one of the principal sources of cochineal exported to the Christian West, appears far more likely. Arabic and Persian sources often refer to Armenian *kirmiz*: see Serjeant, *Islamic Textiles*, 64–66.

<sup>145</sup> The light Venetian pound used for silk and dyestuffs was equivalent to 301 g. The quantity brought by the dyer was far larger than any single shipment sent by the Venetian merchant Giacomo Badoer from Constantinople to Venice from 1437 to 1439, on which see Cardon, "Du 'verme cremexe'," 66–71.

<sup>146</sup> On recipes, see above, p. 211.

<sup>147</sup> Shatzmiller, *Labour in the Medieval Islamic World*, 66–67, deals only briefly with that issue.

<sup>148</sup> See Goitein, *A Mediterranean Society*, 1:51.



Thebes.<sup>149</sup> A similar labor migration occurred after the deportation of silk workers from Thebes and Corinth in 1147, ordered by King Roger II of Sicily.<sup>150</sup> From the account of the Jewish traveler Benjamin of Tudela, who visited Thebes around 1160,<sup>151</sup> it is obvious that the local silk industry had speedily recovered after that event and was again producing high-grade silks on a large scale. It follows that within a short period it had managed to replace and possibly even enlarge its workforce. This flow of labor must again have taken place at the expense of other Byzantine silk centers, mainly Constantinople and Thessalonike, and appears to have hastened the erosion of the capital's preeminence in Byzantine silk manufacture in the second half of the twelfth century.<sup>152</sup>

Occasionally skilled artisans spontaneously crossed political, linguistic, and cultural boundaries. In the late tenth and early eleventh centuries numerous Oriental Christian and Jewish immigrants from Syria settled in Byzantine Asia Minor and in Constantinople, where they could find congenial ethnic and religious surroundings.<sup>153</sup> As noted earlier, this was precisely the period in which social and economic factors generated a rising demand for silks in the empire, obviously requiring an expansion of the skilled workforce.<sup>154</sup> There is good reason to believe that there were silk weavers and dyers among the immigrants, as among those who left Syria and Palestine for Egypt in the same period.<sup>155</sup> In addition, a two-way Jewish mobility between Byzantium and Egypt is particularly well attested for that period by the documents of the Cairo Geniza.<sup>156</sup> Around 1090 the Jewish dyer who had spoiled a silk cloth, mentioned earlier, moved freely from the empire to Egypt.<sup>157</sup> One should not rule out the possibility that after 1147 some Jewish silk workers from Egypt joined the labor force in Thebes, in addition to Byzantine artisans. Jewish emigration from Egypt to Thebes is suggested by a Geniza letter written somewhat earlier, around 1135.<sup>158</sup>

At times the transfer of ornamental elements and especially that of silk technology and weaves was generated by the forceful relocation of silk workers. It is likely that only a few Muslim craftsmen settled of their own free will in Byzantium, unless they intended or agreed to convert to Christianity.<sup>159</sup> On the other hand, there were artisans among the

<sup>149</sup> See Jacoby, "Silk in Western Byzantium," 476–80, 485.

<sup>150</sup> It is unlikely, though, that all the silk artisans of Thebes and Corinth were transplanted to Sicily in 1147, as claimed by some contemporary chroniclers: see *ibid.*, 462–63, 466–68, 486–88.

<sup>151</sup> For the approximate dating of his visit, see D. Jacoby, "Benjamin of Tudela in Byzantium," in P. Schreiner and O. Strakhov, eds., *Χρυσᾷ Πύλῃ / Златая врата: Essays Presented to Ihor Ševčenko on His Eightieth Birthday by His Colleagues and Students* (Cambridge, Mass., 2002) = *Palaeoslavica* 10.1 (2002): 180–83.

<sup>152</sup> See Jacoby, "Silk in Western Byzantium," 485–87.

<sup>153</sup> See D. Jacoby, "The Jews of Constantinople and Their Demographic Hinterland," in C. Mango and G. Dagron, eds., *Constantinople and Its Hinterland. Papers from the Twenty-Seventh Spring Symposium of Byzantine Studies, Oxford, April 1993* (Aldershot, 1995), 223–26, repr. in Jacoby, *Byzantium, Latin Romania and the Mediterranean*, no. 4.

<sup>154</sup> See above, p. 207.

<sup>155</sup> See above, p. 224.

<sup>156</sup> See Jacoby, "The Jews of Constantinople," 223–28.

<sup>157</sup> See above, pp. 223–24.

<sup>158</sup> See Jacoby, "Silk in Western Byzantium," 485, 487.

<sup>159</sup> On the abjuration of Islam in Byzantium, see A. Rigo, "Una formula inedita d'abiura per i musulmani (fine X–inizi XI secolo)," *RSBN* n.s. 29 (1992): 163–71, who suggests that the formula was related to the Byzantine offensive in eastern Asia Minor and Syria in the late 10th–early 11th century, mentioned above. However, there must have been earlier formulae for Muslim prisoners accepting baptism, regardless of their social status. Constantini Porphyrogeniti imperatoris *De ceremoniis aulae byzantinae*, 2.49, ed. Reiske, 2: 694–95, deals only with the conversion of high-ranking Muslims around the mid-10th century.

captured Muslims enslaved in the empire who remained faithful to their creed. Al-Muqaddasī, who wrote his geographic treatise in the late tenth century, reports in his description of Constantinople that some commoners among the Muslim slaves were employed in imperial workshops (*ṣanaʿiʿ*) included in the Dar al-Balat. We may safely assume that a number of these slaves exercised their craft in the workshop manufacturing imperial *dībāj*, to which al-Muqaddasī refers somewhat earlier in connection with the imperial palace.<sup>160</sup> These slaves must already have been skilled silk workers in their lands of origin. The Arab author adds that when asked about his craft, “the discreet man” among the slaves does not reveal it, for fear of remaining in Byzantium. It is obvious that Muslim slaves engaged in manufacturing in the empire had less chance than others of being rapidly freed and repatriated in the framework of prisoners’ exchanges between Byzantine and Muslim rulers.<sup>161</sup> In view of the presence of Muslim slaves in the imperial silk workshops, it is likely that there were also some among the slaves active in various branches of the private silk industry in Constantinople.<sup>162</sup> In the early tenth century the workshops established by members of the silk weavers’ guild employed slaves as laborers and foremen, the latter position implying high-grade technical skills.<sup>163</sup> There can be no doubt that silk workers from Muslim countries residing in Byzantium, whether as free individuals or as slaves, contributed to some extent to the dissemination of the silk terminology, designs, and technology with which they were familiar, as well as to the production of some types of Islamic weaves and pieces of clothing in the empire. A similar development in the opposite direction also appears likely. As noted earlier, luxury silks woven by slaves in 942/3 in Fāṭimid Ifrīqiya were found in 1000/1001 in the caliph’s palace in Cairo.<sup>164</sup> These silks cannot have been produced by black slaves, who were numerous in Tunisia in the first half of the tenth century, yet lacked the skills for that work. It follows that the textiles must have been manufactured by Byzantine silk weavers captured in Muslim raids on the empire’s territories in that period. Their precise origin cannot be determined.

The forceful relocation of silk workers was sometimes carried out on a fairly large scale. King Roger II of Sicily was clearly aware of the importance of the silk industry in western Byzantium and of the high quality of its products. His silk cape, later used as coronation mantle by the rulers of the Holy Roman Empire, is made of a plain kermes-dyed

<sup>160</sup> The author did not visit Constantinople and does not mention his sources of information, yet his account appears nevertheless credible: al-Muqaddasī, *Aḥsan al-taqāsim fi maʿrifat al-aqālīm*, ed. M. J. de Goeje, *Bibliotheca Geographica Arabica* 3 (Leiden, 1906), 147–48; French trans. in A. A. Vasiliev and M. Canard, *Byzance et les Arabes* (Brussels, 1935–50), 2.2:423; inaccurate English translation or rather paraphrase by B. A. Collins, reviewed by M. Hamid al-Tai, in al-Muqaddasī, *The Best Divisions for Knowledge of the Regions* (Reading, 1994), 135.

<sup>161</sup> Two Muslim goldsmiths were nevertheless among the prisoners exchanged in 860: al-Ṭabarī, *Taʾrīkh al-rusul waʾl-mulūk*, ed. M. J. de Goeje, 15 vols. (Leiden, 1879–1901), 2:1451, trans. J. L. Kraemer, *The History of al-Ṭabarī (Taʾrīkh al-rusul waʾl-mulūk)*, vol. 34 (Albany, N.Y., 1985), 170.

<sup>162</sup> *EB* 6.7, 7.3, 7.5, ed. Koder, 98, 100, 102.

<sup>163</sup> *EB* 8.7, ed. Koder, 104: ἡ μισθωτὸν ἢ ἐκλέκτην. Koder, *ibid.*, 105, translates the latter term as “Sortierer (Titrierer?),” which is unlikely. J. Nicole, *Le Livre du Préfet ou l’édit de l’empereur Léon le Sage sur les corporations de Constantinople* (Geneva–Basle, 1894), 164, translates “contremaître,” a far more convincing interpretation in view of the context, although to the best of my knowledge the term does not appear elsewhere in that sense. He was followed by E. H. Freshfield, *Ordinances of Leo VI c. 895 from the Book of the Eparch* (Cambridge, 1938), 26, who translates “foreman craftsman.” See also Maniatis, “Organization,” 294.

<sup>164</sup> See above, pp. 203–4.

samite of Byzantine origin that may well have been manufactured in Thebes.<sup>165</sup> However, the decoration and Arabic inscription of the cape were executed in 1133/4 by Muslim embroiderers working in the royal textile workshop at Palermo.<sup>166</sup> The Theban origin of the fabric is further suggested by the king's policy in 1147. As noted earlier, after capturing Thebes and Corinth he deported many of their silk workers to his capital, Palermo, obviously because his royal workshop could not produce the high-quality silks manufactured by the Byzantine artisans. One may safely assume that if the Theban workers failed to take along their looms, they could easily have devised the construction of new ones. It is noteworthy that Roger II ordered the Thebans to teach their crafts to his own subjects. His successor, William I, refused to repatriate them when he concluded a peace agreement with Emperor Manuel I Komnenos in 1158.<sup>167</sup> Until 1147 Sicily had an Islamic inheritance in silk manufacture, illustrated by the Arabic names of its silk fabrics which at best were medium-grade products.<sup>168</sup> The resettlement of Byzantine silk workers in Palermo injected Byzantine elements into the textiles manufactured in the existing royal atelier. A letter of Hugo Falcandus, dated 1190, lists several types of Byzantine silks produced in that workshop, all of which bear Greek names: *amita*, *dimita*, *triamita*, *examita*, *diarodon*, *diapisti* (in fact, *diaspri*), and *exarentasmata*.<sup>169</sup> The forceful resettlement of skilled silk workers was also practiced in the thirteenth century by the Mongol rulers on a scale and over distances that remain unequaled.<sup>170</sup> Its aim was to insure the supply of the huge amounts of silks required by their courts for distribution, in accordance with the nature of the Mongol political culture and system of government.<sup>171</sup> This relocation resulted in a creative blending of ornamental elements, styles, and technology, illustrated by the "Tartar cloths" and other Oriental silks examined below.

<sup>165</sup> See R. Bauer in M. D'Onofrio, ed., *I Normanni, popolo d'Europa 1030–1200* (Venice, 1994), 279–90. On the Byzantine origin of the cloth, see *ibid.*, 281–84 (where "XIII secolo" is a misprint for "XII secolo"), and especially M. Flury-Lemberg, *Textile Conservation and Research: A Documentation of the Textile Department on the Occasion of the Twentieth Anniversary of the Abegg Foundation* (Bern, 1988), 200–201, who reached this conclusion on the basis of comparison with other silks. On the likely origin from Thebes, also suggested by the dyestuff used, see Jacoby, "Silk in Western Byzantium," 462–64, and *idem*, "Seide und seidene Textilien," 63–64. Samite (from Byzantine Greek ἑξάμιτον, "six-threaded") was a rather heavy, strong, and glossy silk cloth in twill weave based on a weave unit of six threads.

<sup>166</sup> On the embroidery and its dating, see T. Al Salman, "Arabische Inschriften auf den Krönungsgewändern des Heiligen Römischen Reiches," *JbKSWien* 78 (1982): 31–34. Yet for a new reading of the inscription, see J. Johns, "Die arabischen Inschriften der Normannenkönige Siziliens: eine Neuinterpretation," in Seipel, *Nobiles Officinae*, 48–49. Even recently scholars dealing with the mantle have not always distinguished between the cloth, the manufacturing of the cape, and the latter's embroidered decoration and inscription, executed after King Roger's coronation in 1130.

<sup>167</sup> See Jacoby, "Silk in Western Byzantium," 462–67 and n. 80, and *idem*, "Seide und seidene Textilien," 64–65.

<sup>168</sup> See above, pp. 200–201.

<sup>169</sup> *La Historia o Liber de Regno Sicilie e la epistola ad Petrum Panormitane ecclesie thesaurarium di Ugo Falcando*, 2d ed., ed. G. B. Siragusa, FStI Scrittori secolo XII, 22 (Rome, 1897), 178–80. See Jacoby, "Seide und seidene Textilien," 65–68, on the reliability of Falcandus and the survival of Islamic weaving and embroidery in private workshops, next to Byzantine weaves in the royal ateliers. Several extant silks formerly ascribed to Sicily are now believed to be of Spanish origin: see von Wilckens, *Die textilen Künste*, 111; *eadem*, "Some Remarks on Spanish Samites from the 12th and 13th Centuries," *CIETA* 70 (1992): 86–90.

<sup>170</sup> See T. T. Allsen, *Commodity and Exchange in the Mongol Empire* (Cambridge, 1997), 30–45, and below, p. 231 and note 195.

<sup>171</sup> See Allsen, *Commodity and Exchange*, 11–26, 102–4; T. T. Allsen, "Robing in the Mongolian Empire," in Gordon, *Robes of Honor* (as above, note 88), 305–13.

Before doing so, however, we must turn to the Christian West. The continuous flow of silks reaching that region from the eastern Mediterranean since the seventh century is well attested. However, until the late tenth or early eleventh century their diffusion was restricted to rulers, lay and church dignitaries, and ecclesiastical institutions receiving them as gifts or having the means to purchase them. The important function of trade in that flow of silks has been largely overlooked.<sup>172</sup> In the following period the demand for them spread within the urban lay society of southern Italy and gradually extended from that region to other parts of the Christian West. It prompted both growing imports of Byzantine and Islamic silks and the promotion of high-grade silk manufacture in Italy. Genoa and Venice decisively furthered both these developments by the transfer of finished products on the one hand and raw materials and silk technology on the other.<sup>173</sup>

By the eleventh century the domestic weaving of silks and half-silks was practiced on a modest scale in southern Italy, Lucca, Genoa, Venice, and possibly also elsewhere in Italy, in response to local and regional demand for small pieces of clothing and bedding. It would seem that these items were mainly manufactured by women, who sold their products either directly to customers or to mercers. This activity continued in the following centuries in Italian cities witnessing the establishment of silk guilds, yet outside the latter's framework.<sup>174</sup> Lucca was the first city of the Christian West manufacturing large pieces of high-grade silks. Their production apparently began around the mid-twelfth century. Genoa acted as main intermediary in the supply of raw materials to Lucca, most of which were imported from the eastern Mediterranean. While initially relying on local labor, the first stage in the growth of the Lucchese industry, as in Thebes, would not have been possible without technical information enabling the construction and operation of sophisticated looms or the arrival of highly skilled artisans from other silk centers. If such workers indeed came to Lucca, they may have done so spontaneously, in response to incentives offered by entrepreneurs, or have been recruited abroad. In any event, there is no evidence regarding their origin. For a long time it has been argued that these were Arabs, Greeks, or Jews from southern Italy or Sicily. The involvement of Jews in the dyeing of cloth in southern Italy has often been adduced to bolster the argument that they were instrumental in the launching of high-grade silk weaving in Lucca, yet the two activities required completely different skills. The supposed arrival of silk workers from Sicily after that island's occupation by Charles I of Anjou in 1266 is also irrelevant with respect to the first stage of the Lucchese silk industry, since by the turn of the thirteenth century it was already exporting high-grade fabrics.<sup>175</sup> More recently there has been an emphasis on Lucca's location in the western Mediterranean, the broad diffusion of Spanish silks in the

<sup>172</sup> See Jacoby, "Silk Crosses the Mediterranean," 55–61; M. McCormick, *Origins of the European Economy. Communications and Commerce, AD 300–900* (Cambridge, 2001), 285, 719–28.

<sup>173</sup> See Jacoby, "Silk Crosses the Mediterranean," 61–63; idem, "Dalla materia prima," 265–304; idem, "Genoa, Silk Trade and Silk Manufacture," 11–40.

<sup>174</sup> See Jacoby, "Silk Crosses the Mediterranean," 66, 71; idem, "Genoa, Silk Trade and Silk Manufacture," 18–19, 31–32; idem, "Dalla materia prima," 269–70; P. Mainoni, "La seta in Italia fra XII e XIII secolo: Migrazioni artigiane e tipologie seriche," in Molà et al., *La seta in Italia* (as above, note 3), 379–80. Some of these small pieces are listed above, pp. 207–8. On the continuing demand for them in Italy, see Muzzarelli, "Seta posseduta," 213, 215, 218–21; eadem, *Guardaroba medievale*, 238–40.

<sup>175</sup> See Jacoby, "Genoa, Silk Trade and Silk Manufacture," 15–20, 38–39; Mainoni, "La seta in Italia fra XII e XIII secolo," 372–77, 381, is still somewhat hesitant to dismiss the role of the Jews in the initial phase of the Lucchese silk industry.

twelfth-century West, and Genoa's import of these textiles, which supposedly provided the initial impetus to the Lucchese manufacture of high-grade silks.<sup>176</sup>

Since none of these explanations is supported by the available sources, we must rely on circumstantial evidence. Byzantine fabrics, more than any others, circulated widely in Italy by the twelfth century. It is highly significant that in Lucca silk cloth was called *cen-datum* in Latin or *zendado* in Italian (English sendal), generic names derived from Byzantine Greek *sendes*. This term also defined a specific type of fabric.<sup>177</sup> Most other types of silk textiles manufactured in Lucca in the twelfth and thirteenth centuries also bore Byzantine names: *samiti* or samites, *sarantasimi*, and *catasamiti*. The terminology provides a strong argument in favor of a Byzantine, rather than a Spanish, origin of the skilled workers or the advanced technology required for the initial development of the Lucchese silk industry. It does not contradict the additional influence of Islamic Spanish silks, implied by the production of the Spanish *bagadelli* documented at the turn of the thirteenth century.<sup>178</sup> In turn the emigration of silk workers from Lucca resulted in the spreading of Lucchese technology and ornamental patterns. The incentives jointly offered by private entrepreneurs and the urban governments of Bologna and Milan in the 1230s induced a number of silk workers producing *cendata de Lucha* to settle in these cities.<sup>179</sup> The unstable political conditions existing in Lucca in the first two decades of the fourteenth century induced larger numbers of silk workers to emigrate to Venice, Bologna, and Florence.<sup>180</sup>

Venice became the second major manufacturer of silks in the Christian West. The chronological conjunction of the collapse of silk manufacture in Constantinople in the wake of the Latin conquest of the city in 1204 and the launching of high-grade silk production in Venice around that time does not appear to have been coincidental. Venetian merchants previously acquainted with Byzantine silk centers must have been instrumental in the creation of the required industrial infrastructure in their own city and in the recruitment of the required workforce. It is not impossible that silk artisans from Constantinople arrived spontaneously or were brought to Venice.<sup>181</sup> Significantly, in Venice silk weavers were called *samitarii* or manufacturers of samite, a term of Byzantine origin as noted above. Yet paradoxically two brothers weaving sendals before 1221 provide the earliest evidence regarding the production of high-grade silks in the city. The regulations of the Venetian silk guild of 1265 mention seven types of cloth, five of which have Greek names: *catasamiti*, *sarantasimi*, *purpure*, *diaspri*, and *samiti contrafacti*.<sup>182</sup> The Byzantine imprint

<sup>176</sup> See B. Tietzel, *Italienische Seidengewebe des 13., 14. und 15. Jahrhunderts* (Cologne, 1984), 58; von Wilckens, *Die textilen Künste*, 111, who, however, fails to clarify the nature and practical aspects of that impetus. On Genoese imports of silks from Islamic Spain, see above, p. 218.

<sup>177</sup> See above, note 128.

<sup>178</sup> On which see above, p. 218.

<sup>179</sup> See M. F. Mazzaoui, "The Emigration of Veronese Textile Artisans to Bologna in the Thirteenth Century," *Atti e memorie della Accademia di agricoltura, scienze e lettere di Verona* ser. 6, 19 (1967–68): 2–6, 40, 43–45, nos. 60, 67–69, 123–24, 127–35; Mainoni, "La seta in Italia fra XII e XIII secolo," 382–83.

<sup>180</sup> See Molà, *La comunità dei Lucchesi*, 24–31; Mainoni, "La seta in Italia fra XII e XIII secolo," 384.

<sup>181</sup> Note that some Byzantine glass painters arrived in Venice from unknown locations in the empire in the late 13th century: see A. E. Laiou, "Venice as a Center of Trade and Artistic Production in the Thirteenth Century," in H. Belting, ed., *Il Medio Oriente e l'Occidente nell'arte del XIII secolo*, *Atti del XXIV Congresso Internazionale di Storia dell'Arte*, Bologna, 1975 (Bologna, 1982), 2:14–15, 18–19.

<sup>182</sup> See Jacoby, "Dalla materia prima," 275–78, 280–83. On samite, see above, note 165, and note the guild's name above, note 44.

in Venetian silk manufacturing also extended to ornamental designs. Venice followed Byzantine traditions in that field more closely than any other western weaving center.<sup>183</sup>

One of the silk types produced in Venice, called *samiti contrafacti*, “counterfeited” or “imitated samites,” is of particular interest in this context.<sup>184</sup> There is no indication about the precise nature of this cloth. It is likely, though, that it preserved the Byzantine weave of samite while combining silk with another thread. By 1265 Venice was competing with the high-grade fabrics of Lucca by producing half-silks woven of silk blended with cotton or hemp. At the same time Venetian weavers were also manufacturing gold-interwoven *baudekyns* or “Baghdadi” silks, imitations of Islamic fabrics.<sup>185</sup> Although cheaper than all-silk fabrics, the Venetian half-silks were nevertheless high-grade products.<sup>186</sup> It is noteworthy that the earliest extant silk piece decisively identified as Venetian is a half-silk bearing a Venetian seal, which was buried in 1314 in the tomb of a Dominican saint at Forlì, southwest of Ravenna. The production of half-silks in Venice is yet another illustration of the impact of the supply side on the stimulation of demand, effected by the downscaling of expensive luxury products.

The growing success of Venetian half-silks clearly restricted the share of Lucchese products in the highly competitive silk market of the Christian West. In order to offset its losses, Lucca resorted to the imitation of foreign half-silks, in both weave and decoration. A Lucchese statute of 1308 enjoined weavers imitating silk and gold textiles as well as other silk fabrics produced in Venice, Genoa, and Arezzo to adhere strictly to the specifications and standard sizes of the silk pieces common in each of these cities. The statute was obviously issued at the request of entrepreneurs and merchants complaining about the weavers’ sloppy work and was intended to promote a broad commercialization of Lucchese imitations. Significantly, the officials compiling the inventory of the papal treasury in Rome in 1295 could not always determine whether a piece of plain or figured silk was Lucchese or Venetian.<sup>187</sup> The artistic and technical interaction achieved in the two cases just mentioned does not appear to have involved any migration of silk workers between Venice and Lucca.

The acquaintance of the Christian West with Oriental artifacts and textiles, including silks, was greatly enhanced by a series of closely interrelated factors: the growing pilgrimage to the Holy Land from the eleventh century onward, the Crusades, the establishment of the Latin states in the Levant around the year 1100, their existence for about two centuries, and the continuous flow of Latins visiting that region or settling there in the twelfth and thirteenth centuries. These factors also generated a strong fascination and infatuation with the exotic Orient and with Oriental objects, especially finely crafted ones endowed with prestige and, occasionally, also with an aura of mystery.<sup>188</sup> Acre fulfilled an important role in that context. It was the major port and market of the Frankish Levant, the main destination of western merchants and immigrants in that region, and the exclusive one of

<sup>183</sup> See King, “Some Unrecognised Venetian Woven Fabrics,” 59–62.

<sup>184</sup> For this paragraph, see Jacoby, “Dalla materia prima,” 282–88.

<sup>185</sup> *Ibid.*, 287.

<sup>186</sup> The guild regulations of 1265 prohibited the use of low-grade and cheap floss silk both in the manufacture of all-silk and half-silk textiles: *ibid.*, 290–91.

<sup>187</sup> *Ibid.*, 288–90; Jacoby, “Genoa, Silk Trade and Silk Manufacture,” 35–36.

<sup>188</sup> On the exotic element, see briefly D. Jacoby, “Nuovi e mutevole orizzonti: Verso ed oltre l’Oriente mediterraneo,” in G. Ortalli, ed., *Storia d’Europa*, vol. 3. *Il Medioevo* (Turin, 1994), 1187–88.

crusaders and pilgrims. Between 1191 and 1291 western pilgrims came almost every year in the thousands to visit the Holy Land. In view of their large numbers and their widely differing origins, merchants, crusaders, and especially pilgrims returning home fostered a broad dissemination of Oriental objects and stimulated a growing demand for them in the Christian West.<sup>189</sup>

Some of the silks shipped from the Levant to the West were produced in the Frankish states by members of the indigenous communities, who pursued their activity and perpetuated their artistic and technical traditions under Frankish rule. Antioch and Tripoli were already famous silk centers before the First Crusade.<sup>190</sup> Other silk fabrics reached Frankish ports from cities under Muslim rule, among them Aleppo, Damascus, and Mosul, the latter a renowned manufacturing center of silk fabrics and silk and gold textiles.<sup>191</sup> The Mongol advance and conquests in the Middle East around 1260 generated new developments with respect to silks. The Mongol sack of Baghdad, Mosul, and Aleppo crippled the industries of these cities. Moreover, it was common Mongol policy to deport silk workers from captured territories.<sup>192</sup> Some workers may nevertheless have managed to flee earlier from Syrian inland cities and reach the Frankish territories extending along the Levantine coast.<sup>193</sup> On the other hand, the consolidation of Mongol domination over vast expanses of Asia had a substantial impact on trade, since for some ninety years it established secure conditions for transcontinental traveling, the outflow of Oriental commodities to the Mediterranean region, and the penetration of western merchants into inner Asia. These developments contributed decisively to the diffusion of distinctive types of Oriental luxury silks in the Frankish Levant and in the Christian West. The evidence adduced below offers a new dating for the various stages of that process.

To be sure, Oriental silks had continuously reached the Christian West for a long period before the second half of the thirteenth century. In addition to those already mentioned above, we find *kanjī* half-silks and *ʿattābī*, the latter manufactured either in the Middle East or in Spain, among the pieces listed in the papal inventory of 1295.<sup>194</sup> However, in the wake of the Mongol conquests previously unrecorded types of silks appear in western sources, most conspicuously fabrics known as *panni tartarici*, *dras de tartais*, or *tartaires*. “Tartar cloths” was a generic name applied to a large group of silk and gold textiles from Central Asia and the Middle East, both plain and figured, despite diversity among

<sup>189</sup> See D. Jacoby, “Il ruolo di Acri nel pellegrinaggio a Gerusalemme,” in M. S. Calò Mariani, ed., *Il cammino di Gerusalemme* (Atti del II Convegno Internazionale di Studio, Bari–Brindisi–Trani, 18–22 maggio 1999) (Rotte mediterranee della cultura 2) (Bari, 2002), 31–50; D. Jacoby, “Society, Culture and the Arts in Crusader Acre,” in D. H. Weiss, ed., *France and the Holy Land: Frankish Culture at the End of the Crusades* (Baltimore, 2004), 97–137.

<sup>190</sup> See Jacoby, “Silk Crosses the Mediterranean,” 63–65; idem, “Dalla materia prima,” 267–68.

<sup>191</sup> On these centers, see Serjeant, *Islamic Textiles*, 114–18 and 38–39, respectively. On 12th- and 13th-century trade between the Levantine coast and its Muslim hinterland, see D. Jacoby, “Mercanti genovesi e veneziani e le loro merci nel Levante crociato,” in *Genova, Venezia, il Levante nei secoli XII–XIV, Atti del Convegno internazionale di studi, Genova–Venezia, 10–14 marzo 2000*, ed. G. Ortalli and D. Puncuh = *Atti della Società Ligure di Storia Patria* n.s. 41 (115.1) (2001): 233–36.

<sup>192</sup> Raschid-Eldin, *Histoire des Mongols de la Perse*, ed. and trans. E. Quatremère (Paris, 1836), 337–39, reports that the Il-Khan of Persia, Hülagü, deported artisans from Aleppo after capturing the city in 1260, yet does not specify in which crafts they worked. However, see Allsen, *Commodity and Exchange*, 39.

<sup>193</sup> On Syrian refugees, see Jacoby, “Mercanti genovesi e veneziani,” 234.

<sup>194</sup> Molinier, “Inventaire du trésor du Saint Siège,” *BEC* 46 (1885): 30–32, respectively nos. 951, 973 and 965, 968, 969, 975. On these two types of textiles, see above, notes 62 and 108.

them in technical features and, with respect to figured pieces, also in design. Their distinctive technical features and the rich repertory of their decoration, which combines Islamic, Central Asian, and Chinese motifs and patterns, distinguishes them both from Far Eastern and Western fabrics.<sup>195</sup> They are first documented in the 1260s, thus earlier than generally assumed. Three *purpure tartarenses* are recorded in a list of grants made in Hungary shortly before 1264 by Stephen, son of King Bela IV.<sup>196</sup> The textiles were purchased either from Venetian merchants in the Adriatic port of Zara or in Venice proper.<sup>197</sup> Other silks appearing in the list are defined as *transmarinas* and had thus been manufactured and purchased in the Levant. Indeed, Count Eudes of Nevers owned no less than twenty-three *tartaires* while in Acre in 1266. He had undoubtedly acquired the fabrics in that city and intended to take them along on his return journey home, once his crusading expedition would have come to an end. After his death in Acre one of the pieces sold for 12 bezants, a fairly substantial sum.<sup>198</sup> These *tartaires* are mentioned casually in a commercial context, without any indication regarding their nature, which strongly suggests that they were already well known at Acre by that time. Their diffusion in the West was effected to some extent by crusaders and pilgrims returning home, as implied by the case of Eudes of Nevers, yet it was primarily the result of trade. Their export from Acre must have been carried out mainly by Venetian merchants, since the Genoese had been ousted from the city in 1258 and traded there only intermittently until its fall to the Muslims in 1291.<sup>199</sup>

Lay inventories record further “Tartar cloths” in the Christian West in 1276–77 and again around 1281, in the latter instance in large numbers.<sup>200</sup> A further increase in quantity is reflected by western lay and ecclesiastical inventories of the following period, which

<sup>195</sup> See Wardwell, “*Panni Tartarici*,” 95–173; J. C. Y. Watt, “A Note on Artistic Exchanges in the Mongol Empire,” in L. Komaroff and S. Carboni, eds., *The Legacy of Genghis Khan. Courtly Art and Culture in Western Asia, 1256–1353* (New York, 2002), 62–73; and L. Komaroff, “The Transmission and Dissemination of a New Visual Language,” in *ibid.*, 168–95.

<sup>196</sup> The grants are recorded in an undated document edited by G. Soranzo, “Acquisti e debiti di Bela IV re d’Ungheria,” *Aevum* 8 (1934): 348–56. L. Zolnay, “István ifjabb király számadása 1264–böl,” *Budapest Régiségei* (Budapesti Történeti Múzeum) 21 (1964): 79–111 (Hungarian), has identified the grantor as the king’s son, the places at which the grants were made, and the latter’s beneficiaries, from which the date proposed here has been deduced. I wish to thank Nora Berend, Cambridge University, for kindly supplying information found in that study. She briefly deals with other aspects of the document in her book *At the Gate of Christendom. Jews, Muslims and “Pagans” in Medieval Hungary, c. 1000–c. 1300* (Cambridge, 2001), 115, 144–45. Wardwell (as in previous note) was not aware of this testimony when dealing with “Tartar cloths,” nor of the one regarding Acre adduced below.

<sup>197</sup> Soranzo, “Acquisti e debiti,” 348 n. 1, identifies the author of the list of grants with a merchant of Zara documented in that city in 1266. Venetian imports of silks to Zara were exempted from taxes by virtue of an agreement concluded in 1217 between King Andreas II of Hungary and Venice, which despite some incidents in later years remained valid in the reign of Bela IV (1235–70), the period in which the “Tartar cloths” were purchased. However, it is also possible that the merchant from Zara purchased the silks in Venice at the Fondaco dei Tedeschi, where Hungarian merchants enjoyed the same privilege. On the agreement and its validity in both Zara and Venice, see A. Schaube, *Handelsgeschichte der romanischen Völker des Mittelmeergebiets bis zum Ende der Kreuzzüge* (Munich, 1906), 453–55, and G. Rösch, *Venedig und das Reich. Handels- und verkehrspolitische Beziehungen in der deutschen Kaiserzeit*, Bibliothek des Deutschen Historischen Instituts in Rom 53 (Tübingen, 1982), 91–92. On the Venetian handling of “Tartar” fabrics, see also below.

<sup>198</sup> A. M. Chazaud, ed., “Inventaire et comptes de la succession d’Eudes, comte de Nevers (Acre 1266),” *Mémoires de la Société Nationale des Antiquaires de France* 32 (1871): 187, 191, 203, 206.

<sup>199</sup> See Jacoby, “Mercanti genovesi e veneziani,” 219–20.

<sup>200</sup> C. Dehaisnes, ed., *Documents et extraits divers concernant l’histoire de l’art dans la Flandre, l’Artois et le Hainaut avant le XV<sup>e</sup> siècle* (Lille, 1886), 71, 75.



often offer brief descriptions of figured pieces.<sup>201</sup> Many “Tartar cloths” are listed in the papal inventory of 1295.<sup>202</sup> Most of them must have been purchased, whether directly by that institution or by individuals who offered them to the latter.<sup>203</sup> Some of these textiles, however, may have been diplomatic gifts from the Mongol Il-Khans of Persia, with whom the popes exchanged embassies. In 1288 an envoy of Arghun, Rabban Sauma, delivered to Pope Nicholas IV a letter as well as gifts, which according to Mongol custom presumably included silks.<sup>204</sup> The Mongol rulers of Persia had a *tirāz* workshop producing sumptuous silk and gold textiles in their capital of Tabriz, the activity of which is attested in 1293.<sup>205</sup> Interestingly, the papal inventory of 1295 mentions four small silk pieces from Tabriz sewn onto other silks.<sup>206</sup>

Additional types of eastern silks bearing other names are recorded at that time and in the following two decades. Silks called *pannus tarsicus*, *pannus de Tarsico*, *de Tars*, or *de Tarsen* appear in inventories from 1295 onwards. Some were plain, others figured or cloths of gold, with designs similar to those of “Tartar” silks. They were apparently woven in Tarsus, a city of southeastern Asia Minor in the kingdom of Cilician Armenia, which explains why one of them was listed in 1315 as *de opere de Turkey* and others appear in 1331–1333 in a group of vestments made *de pann’ de Tarsen’ & Turkey*. It is obvious that in these cases “Turkey” stands for Asia Minor.<sup>207</sup> The inventory of items belonging to the wardrobe of King Philip V of France in 1317 distinguishes between *tartaires*, *draps d’or appelez naques*, and *nachis*. In the late thirteenth century the Venetian Marco Polo refers to these silks as

<sup>201</sup> Wardwell, “*Panni Tartarici*,” 134–44, presents a list of figured pieces recorded in eleven inventories, the earliest one from 1295, yet omits plain “Tartar” silks. The reference to a Chinese silk *ibid.*, 134 and 135, no. 5, is mistaken, since *cinericeus* means “ash gray.”

<sup>202</sup> E. Molinier, “Inventaire du trésor du Saint Siège,” *BEC* 46 (1885): 20, 26–35, 40–44; *BEC* 47 (1886): 647, 652–53, 662, *BEC* 49 (1888): 228.

<sup>203</sup> Papal purchases of silks were not unusual. In 1262 Pope Urban IV ordered the acquisition of forty or more pieces of high-quality samite produced in Greece for a total of 2,000 hyperpers: J. Guiraud, ed., *Les registres d’Urbain IV (1261–1264): Recueil des bulles de ce pape*, 4 vols. (Paris, 1901–58), 1:16–17, no. 66. Since it is likely that these silks or some of them survived until 1295, they must have been included among those registered in the papal inventory of that year as originating in Romania, the Byzantine and former Byzantine territories: see Molinier, “Inventaire du trésor du Saint Siège,” *BEC* 46 (1885): 19, 29–32, 40–41, and *BEC* 47 (1886): 647, 651–52, 655, 662; also Jacoby, “The Production of Silk Textiles in Latin Greece,” 25.

<sup>204</sup> On this mission, see K. M. Setton, *The Papacy and the Levant (1204–1571)*, vol. 1, *The Thirteenth and Fourteenth Centuries* (Philadelphia, 1976), 146–47. Guiscardo de’ Bastari, scion of a Florentine family, arrived in 1300 at the court of Pope Boniface VIII as the envoy of the khan of Persia. According to an 18th-century author, he as well as a large number of those who accompanied him wore clothes in Tartar fashion: see L. Petech, “Les marchands italiens dans l’empire mongol,” *JA* 250 (1962): 566 and 573 n. 70. Such a display may have bolstered the demand for “Tartar cloths.”

<sup>205</sup> See Wardwell, “*Panni Tartarici*,” 109, 111.

<sup>206</sup> Molinier, “Inventaire du trésor du Saint Siège,” *BEC* 46 (1885): 31–33, 35, nos. 973, 974, 991, 1017. Molinier reproduced only part of the place name, *de Taur . . .*, without identifying it. The full reading must be *de Taurisio*.

<sup>207</sup> Partial list in Wardwell, “*Panni Tartarici*,” 144. Additional references in V. Gay, *Glossaire archéologique du Moyen Âge et de la Renaissance*, 2 vols. (Paris, 1887), 1:584–85, from 1295 onward; J.-M. Richard, *Une petite nièce de Saint-Louis. Mahaut, comtesse d’Artois et de Bourgogne (1302–1329). Étude sur la vie privée, les arts et l’industrie, en Artois et à Paris au commencement du XIV<sup>e</sup> siècle* (Paris, 1887), 395, *drap de Tarze* in 1315; Dehaisnes, *Documents*, 1:243, *drap de soie de Tarse* in 1322; L. Monnas, “Textiles for the Coronation of Edward III,” *Textile History* 32 (2001): 4–5, dated 1331–33. The identification suggested here rules out other attributions by Wardwell, “*Panni Tartarici*,” 134, who refers to Uighur territories, the region of Turkestan-Mongolia, and by Monnas, “Textiles for the Coronation,” 4, who considers these silks as having a weave similar to Chinese silks.

*nac* and *nasich* and Pegolotti in the 1330s to *nacchi* and *nacchetti*, respectively. All the sources clearly differentiate between these two types, although both were gold brocades produced in China, Persia, and Baghdad.<sup>208</sup> To be sure, Westerners were already acquainted earlier with *nasich* silks. A piece was granted to the Franciscan William of Rubruck during his mission to the Mongols on behalf of King Louis IX of France and was sold by his interpreter in Cyprus in 1255. However, *nacchetti* and *nacchi* do not appear in western inventories before the fourteenth century.<sup>209</sup> The French inventory of 1317 mentioned earlier also lists *nacques que l'en appelle Turquie* and *draps d'or de Turquie*, cloths of gold woven either in Cilician Armenia, like the previous ones, or in the Turkish emirates of Asia Minor.<sup>210</sup> The types of silks just mentioned clearly demonstrate that in the late thirteenth and in the fourteenth century the appellation "Tartar" cloths did not cover all the new categories of silks imported from the eastern Mediterranean into the Christian West.

Sources other than inventories also reflect the increasing volume of Oriental silks reaching the West from the 1260s onwards, when "Tartar cloths" are first recorded. In 1283 the Venetian market was flooded with samites and other unspecified silk fabrics imported from Outremer, the crusader Levant. They most likely come from Acre, where Venetian merchants enjoyed a dominant position, and to a lesser extent from Ayas or Laiazzo, the main port of Cilician Armenia.<sup>211</sup> These fabrics surely included "Tartar cloths," as we may gather from the listing of fabrics called *tartaire d'outremer* in 1302 and 1317.<sup>212</sup> The Genoese too contributed to the large commercial flow of Oriental silks to Italy, yet they seem to have operated mostly from Laiazzo.<sup>213</sup> One of them shipped sendal of unknown origin from that port to Genoa in 1274.<sup>214</sup> The treaty concluded in 1288 between Genoa and King Leo II of Cilician Armenia specifies the customs rate for a camel-load of silk cloth traveling through the latter's territory.<sup>215</sup> It follows that the Genoese were handling fairly large quantities of fabrics produced in Asian silk centers.

In Italy the flow of new types of Oriental silks generated among the social élite an evolution in taste and fashion, which was already well under way by the first decade of the

<sup>208</sup> L. Douët-d'Arcq, ed., *Nouveau recueil de comptes de l'argenterie des rois de France* (Paris, 1874), 2; Marco Polo, *Il Milione*, ed. L. F. Benedetto (Florence, 1928), p. 18, §XXV; Pegolotti, *La pratica della mercatura*, 23, 36, 79, 139, 216, and 423, Index of commodities, s.v. "nacchetti," "nacchi"; W. Heyd, *Histoire du commerce du Levant au moyen âge*, 2 vols. (Leipzig, 1885–86), 2:698–99. The various testimonies decisively rule out the equation of the silks called *nasij* in Arabic and *nakh* in Persian with *nacchetti* in western sources, as well as their identification with "Tartar" cloths, both suggested by Allsen, *Commodity and Exchange*, 1–4. L. Monnas, "Textiles for the Coronation," 3–4, considers both types one variety, and since Pegolotti (as above), 23, 216, twice mentions *nacchetti di seta e d'oro* (thus specifying the nature of these textiles) that some were woven without gold. Neither of these assumptions is warranted.

<sup>209</sup> A. Van den Wyngaert, ed., *Sinica franciscana, I. Itinera et relationes Fratrum Minorum saeculi XIII et XIV* (Quaracchi-Florence, 1929), 259 (chap. XXIX, §21), 298 (chap. XXXIV, §2). See previous note for the fourteenth century.

<sup>210</sup> Douët-d'Arcq, *Nouveau recueil de comptes*, 8–9, 13, 18; see also Monnas, "Textiles for the Coronation," 3–4.

<sup>211</sup> Cessi, *Deliberazioni del Maggior Consiglio di Venezia*, 3:32, §76: *xamittos et drapos omnes sete ultramarinos*.

<sup>212</sup> Dehaisnes, *Documents*, 123; Douët-d'Arcq, *Nouveau recueil de comptes*, 15.

<sup>213</sup> See Jacoby, "Mercanti genovesi e veneziani," 240–41.

<sup>214</sup> L. Balletto, ed., *Notai genovesi in Oltramare. Atti rogati a Laiazzo da Federico di Piazzalunga (1274) e Pietro di Bargaone (1277, 1279)*, Collana storica di fonti e studi diretta da Geo Pistarino 53 (Genoa, 1989), 155–56, notary Federico di Piazzalunga, no. 40.

<sup>215</sup> E. Pallavicino, ed., *I Libri iurium della Repubblica di Genova*, 1.7, Fonti per la storia della Liguria 15, Pubblicazioni degli Archivi di Stato, Fonti 35 (Genoa, 2001), 74–77, esp. 76, no. 1188.

fourteenth century, much earlier than generally assumed. This evolution is reflected by the initiative taken by Italian silk entrepreneurs and manufacturers. In order to compete with imported “Tartar cloths” and other Oriental textiles, they borrowed some of their designs and reproduced them on their own silks. Their imitations were being sold both in Italy and across the Alps. A papal inventory of 1311 described as either “Tartar” or Lucchese a white silk fabric ornamented with stripes woven of red silk and gold thread, which suggests the strong similarity in design of some Oriental and Italian textiles.<sup>216</sup> In 1317 several *tartaires de Luques*, in other words Lucchese imitations, are directly attested among the silks recorded in the treasury of King Philip V of France.<sup>217</sup> A silk and linen cloth has recently been identified as an imitation of a “Tartar” silk and tentatively ascribed to Venice in the second half of the thirteenth or the early fourteenth century.<sup>218</sup> Next to these textiles we find pieces of Lucchese and Venetian *nachis*. The *nachis de Venise* is described as being *sus chanvre* and was thus a cloth woven of silk and hemp.<sup>218</sup> Incidentally, this use of hemp is yet another instance of the downscaling of all-silk luxury fabrics.<sup>219</sup>

It is precisely at that time that the new types of Oriental silks begin to appear in Italian paintings. The first such testimony is provided by Simone Martini’s painting *Saint Louis of Toulouse Crowning Robert of Anjou, King of Naples*, assigned to 1316–19. It has been recently argued that since Martini executed the painting in Naples, he probably represented silks seen at King Robert’s court.<sup>220</sup> This was not necessarily the case, since Naples witnessed at that time an intense commercial and banking activity and a great concentration of wealth outside the royal court.<sup>221</sup> We may surmise, therefore, that the insertion of Oriental silks in the painting reflects the latter’s availability on the local market and, more generally, their growing success and diffusion in Italy by the early fourteenth century. Various fabrics represented in Italian paintings later in that century are adorned with bands of Arabic or Far Eastern scripts or pseudo-scripts.<sup>222</sup> Most of them were presumably genuine Oriental textiles, yet some may have been Italian imitations. Literary texts further confirm the wide diffusion of “Tartar cloths” in the Christian West, from Italy to England, yet do

<sup>216</sup> “Inventarium thesauri Ecclesiae Romanae apud Perusium asservati iussu Clementis Papae V factum anno MCCCXI,” in *Regesti Clementis papae V Appendices* 1 (Rome, 1892), 422. Oriental silks displaying designs with stripes and bands, some of which are extant, have been attributed to Central Asia: see Wardwell, “*Panni Tartarici*,” 99–100, and the list *ibid.*, 135–37.

<sup>217</sup> Douët-d’Arcq, *Nouveau recueil de comptes*, 2, 5, 13, 15, 19. Note the term *tartaire d’outremer*, mentioned above, p. 234, which differentiates genuine Oriental “Tartar cloths” from Italian imitations.

<sup>218</sup> S. Desrosiers, *Soieries et autres textiles de l’Antiquité au XVIe siècle*, catalogue of the Musée national du Moyen Âge—Thermes de Cluny (Paris, 2004), p. 256, no. 136.

<sup>219</sup> Douët-d’Arcq, *Nouveau recueil de comptes*, 2–3. On *nachis*, see above, note 208. We have already noted that so-called “Baghdadi” silks were being manufactured in Lucca in the late 12th century and in Venice in the 13th century. Some *baldekyns de luk’* appear later among the silks purchased by the English royal court. See above, pp. 218, 230, and L. Monnas, “Silk Cloths Purchased for the Great Wardrobe of the Kings of England, 1325–1462,” *Textile History* 20 (1989): 296.

<sup>220</sup> See R. E. Mack, *Bazaar to Piazza. Islamic Trade and Italian Art, 1300–1600* (Berkeley, 2002), 35. On “Tartar” silks in that painting, see L. Monnas, “Dress and Textiles in the St. Louis Altarpiece: New Light on Simone Martini’s Working Practice,” *Apollo* (March 1993): 166–74; Wardwell, “*Panni Tartarici*,” 111.

<sup>221</sup> See G. Petralia, “I Toscani nel Mezzogiorno medievale: Genesi ed evoluzione trecentesca di una relazione di lungo periodo,” in S. Gensini, ed., *La Toscana nel secolo XIV. Caratteri di una civiltà regionale* (Pisa, 1988), 288–317.

<sup>222</sup> See H. Tanaka, “Oriental Scripts in the Paintings of Giotto’s Period,” *GBA*, 6e période, 113, 131e année (1989): 214–26; *idem*, “La testimonianza estremo-orientale nella pittura italiana nell’epoca di Giotto,” in Lucidi, *La seta e la sua via*, 129–32.

not specify their origin.<sup>223</sup> The distinction between genuine Oriental and Italian imitations bearing the same names is excluded when pieces of *tartaryn*, *damasc*, and other types of textiles are listed without indication of provenance.<sup>224</sup> Western imports of Oriental silks from the Levant, Asia Minor, Constantinople, and the Black Sea continued throughout the fourteenth and the first half of the fifteenth century and were sometimes quite substantial. However, these imports were in decline since the 1370s at the latest, as a result of Italian competition.<sup>225</sup>

Some fourteenth-century Italian designers did not restrict themselves to the appropriation of ornamental elements appearing on Oriental silks. They proceeded beyond imitation by integrating these elements within indigenous patterns or were inspired by them to produce highly imaginative new ones. In turn the export of Italian silks displaying these newly devised patterns to the Middle East and Central Asia prompted various workshops of these regions to integrate motifs and designs borrowed from them into their own ornamental compositions. As a result of these cross-cultural exchanges the fourteenth century witnessed the creation of a so-called “international” repertory of silk designs in the region extending from Italy to Central Asia.<sup>226</sup> These developments compound the problems encountered in the attribution of late thirteenth- and fourteenth-century silks bearing an Oriental imprint to specific regions.

Textile historians relying on technical features as a broad criterion for the provenance of silks implicitly assume that Oriental and Italian manufacturers strictly maintained separate technical traditions. Thus Anne Wardwell, so far the author of the most authoritative study on “Tartar cloths,” considers that these silks can be distinguished from Italian imitations by their weaves, their combination of fibers, the structure of their selvages, as well as the nature and composition of their gold or silver threads.<sup>227</sup> This proposition requires some qualifications regarding metal threads. A scientific analysis of the metal surfaces of gold threads used in twenty-six textiles ascribed to either Spain, Italy, Ilkhanid Persia, or Mamlūk Egypt concludes that those in Spanish and Italian silks consist of both gold and silver, those of the Middle East are made of pure gold or pure silver, whereas Central Asian ones contain gold, sometimes with a small amount of silver.<sup>228</sup> However, documentary evidence contradicts this conclusion with respect to Italian metal threads. According to a tariff compiled in Paris in the first half of the fourteenth century, Lucca manufactured pure gold threads as well as silver-and-gold threads, that is, threads of

<sup>223</sup> See P. Toynbee, “Tartar Cloths (*Inferno*, XVII, 14–17),” *Romania* 29 (1900): 559–64, yet contrary to this author, the texts point to woven and not to embroidered designs.

<sup>224</sup> See Monnas, “Silk Cloths,” 296–304. On these silk types, see *ibid.*, 284–87, and D. and M. King, “Silk Weaves of Lucca in 1376,” 67–76.

<sup>225</sup> See D. Jacoby, “The Silk Trade of Late Byzantine Constantinople,” in S. Atasoy, ed., *550th Anniversary of the Istanbul University International Byzantine and Ottoman Symposium (15th century)* (Istanbul, May 30–31, 2003) (Istanbul, 2004), 140–42; D. Jacoby, “Dall’oriente all’Italia. Commerci di stoffe preziose nel Duecento e nel primo Trecento,” in S. Pezzo, ed., *Cangrande della Scala. La morte e il corredo di un principe nel medioevo europeo*, catalogue of exhibition, Museo di Castelvecchio, Verona (Verona, 2004), 143–51.

<sup>226</sup> See Klesse, *Seidenstoffe in der italienischen Malerei*; Wardwell, “Flight of the Phoenix,” 2–35, esp. 16–17, 23–29; eadem, “*Panni Tartarici*,” 102, 113–15; von Wilckens, *Die textilen Künste*, 113–17; Mack, *Bazaar to Piazza*, 35–45. On the other hand, Italian silks appear to have exerted little influence on the patterns of Mamlūk silks: see Mackie, “Toward an Understanding of Mamluk Silks,” 140.

<sup>227</sup> See Wardwell, “*Panni Tartarici*,” 96, 115–17.

<sup>228</sup> N. Indictor, R. J. Koestler, C. Blair, and A. E. Wardwell, “The Evaluation of Metal Wrappings from Medieval Textiles Using Scanning Electron Microscopy-Energy Dispersive X-Ray Spectrometry,” *Textile History* 19 (1988): 3–17.

silver gilt, an alloy of silver and a small amount of gold.<sup>229</sup> This suggests that both types of thread were used in Lucchese silk workshops. Since they were marketed in Paris, they must also have been available elsewhere, an assumption similarly valid for metal threads manufactured in other locations.

Written sources offer compelling evidence to that effect. In 1248 a single notary recorded the export of more than 1,625 bobbins of gold threads produced in Genoa, Lucca, and Montpellier from Marseilles to Acre.<sup>230</sup> In 1269 gold thread was being sent from Genoa to Tyre, since 1258 the main Genoese commercial base in the Frankish Levant.<sup>231</sup> The large quantities of western gold threads arriving in that region could not have been entirely absorbed by local weavers and embroiderers and, therefore, must have been partly reexported to Islamic silk centers.<sup>232</sup> Exports to Muslim countries are indeed attested at a later period. Genoese and Venetian gold threads were shipped to Egypt, according to the treaty of 1290 between Genoa and Sultan Qala'un, on the one hand, and the trade manual of Francesco Balducci Pegolotti, compiled in the 1330s, on the other.<sup>233</sup> In the same period Venetian gold threads reached Cilician Armenia and passed through Cyprus on their way to Damascus, Beirut, and Tripoli.<sup>234</sup> It may be safely assumed, though,

<sup>229</sup> L. Douët-d'Arcq, "Tarif des marchandises qui se vendaient à Paris à la fin du XIIIe siècle," *RA* 9 (1852): 224: *la bote d'or de Lucque, . . . la bote d'argent d'or de Lucque*. For the dating to 1296, see *ibid.*, 213–14; later and more convincing dating by R. H. Bautier, "La place de la draperie brabançonne et plus particulièrement bruxelloise dans l'industrie textile du Moyen Âge," *Annales de la Société Royale d'Archéologie de Bruxelles, volume jubilaire* (Brussels, 1962): 35–36, esp. 36 n. 1, repr. in *idem*, *Sur l'histoire économique de la France médiévale. La route, le fleuve, la foire* (London, 1991), no. 10. Silver gilt embroidery is mentioned in the papal inventory of 1295 as *de argento tracticio deaurato*: Molinier, "Inventaire du trésor du Saint Siège," *BEC* 46 (1885): 20–21, no. 830.

<sup>230</sup> See L. Blancard, ed., *Documents inédits sur le commerce de Marseille au moyen-âge*, 2 vols. (Marseilles, 1884–85), 1:293, no. 77; 1:337, no. 173; 1:344, no. 190; 1:373–74, no. 265; 1:382–83, no. 288; 2:56–57, no. 478; 2:78–79, no. 523; 2:82–83, no. 532; 2:87–88, no. 543 (600 *canoni* or bobbins shipped by a single merchant); 2:110–11, nos. 588–89; 2:133, no. 646. The total quantity cannot be established, since some documents use other units (*scarpa*, possibly skein, *ibid.*, 1:344) or fail to mention figures. See also below, note 232. On Genoese gold threads, see W. N. Bonds, "Genoese Noblewomen and Gold Thread Manufacturing," *MedHum* 17 (1966): 79–81; S. A. Epstein, "Labour in Thirteenth Century Genoa," *Mediterranean Historical Review* 3 (1988): 121, 130. On 13th-century production in Venice, see the guild regulations issued between 1278 and 1297 and later additions: Monticolo and Besta, *I capitolari delle Arti*, 3: 291–322; also L. Brenni, *L'arte del battiloro ed i filati d'oro e d'argento* (Milan, 1930), 44–47.

<sup>231</sup> L. Balletto, ed., "Fonti notarili genovesi del secondo Duecento per la storia del Regno latino di Gerusalemme," in Airaldi and Kedar, *I comuni italiani* (as above, note 72), 277–78, no. 24. On the Genoese in Tyre, see above, p. 232.

<sup>232</sup> Brenni, *L'arte del battiloro*, 39, states that the gold thread wound on a single Genoese bobbin was 90 *canne* of 2.48 m long and thus reached 223.2 m, yet provides no evidence supporting these figures. So far I have been unable to determine the weight of the Genoese bobbin or the latter's relation to the Venetian skein of gold thread. Twenty-eight Venetian skeins weighed a Venetian gold pound of around 324 g, each having 240 threads, the length of which is not stated: [V. Orlandini, ed.], *Tarifa zoè noticia dy pexi e mexure di luogi e tere che s'adovra marcadantia per el mondo* (Venice, 1925), 30, 62: "fili 240 per madasa, e la livra di Veniexia è madase 28"; this Venetian trade manual was compiled in the second half of the 14th or in the early 15th century: see *ibid.*, 4–5. Pegolotti, *La pratica della mercatura*, 71, whose trade manual was drafted in the 1330s, has an erroneous and incomplete version of the same specifications: "ciascuna matassa dè essere lunga fila 240, e ciascuno filo dè essere lungo . . . [figure missing]." For the calculation of the Venetian gold pound, see *Tarifa zoè noticia dy pexi e mexure*, 14, 68, and the modern equivalents in J. E. Dotson, *Merchant Culture in Fourteenth-Century Venice. The Zibaldone da Canal*, Medieval and Renaissance Texts and Studies 98 (Binghamton, N.Y., 1994), 205.

<sup>233</sup> Pallavicino, ed., *I Libri iurium della Repubblica di Genova*, 1.7, 78–83, esp. 80, no. 1189; Pegolotti, *La pratica della mercatura*, 71.

<sup>234</sup> For Cilician Armenia: *ibid.*, 61. In his section on Cyprus Pegolotti, *ibid.*, 90–91, compares Venetian weight figures for gold thread with those of the three Levantine cities, which implies transit through the island. Incidentally, Genoa, Lucca, and Provence also exported their metal threads to Constantinople and

that the evidence collected by Pegolotti also reflects earlier trading in these metal threads. Some silks recorded in the papal inventory of 1295 were embroidered with Cypriot gold thread, yet we do not know where the work was executed.<sup>235</sup> In the first half of the fourteenth century this thread was being sold in Paris and London,<sup>236</sup> as well as in several cities under Muslim rule, namely, Satalia/Attaleia (presently Antalya) on the southern coast of Asia Minor, in addition to Laodicea (presently Lattakya), Acre, and Ramle, three cities under Mamlūk domination.<sup>237</sup>

The distinctions between gold and silver threads according to provenance stated in written sources reveal that each of the western cities mentioned above as well as Cyprus produced its own brand. This is confirmed by the guild regulations of Paris, which prohibited the use of Cypriot gold thread together with gold or silver thread of another origin and, obviously, of a different nature and quality.<sup>238</sup> The numerous references to embroidery with Cypriot gold threads suggest that the latter were particularly suited for that purpose. Unfortunately, these sources fail to yield precise indications regarding the features and composition of metal threads. It is impossible, therefore, to ascribe the latter to any specific production center solely on the basis of scientific analysis. Italian manufacturers must have utilized western threads in their imitations of Oriental silks, rather than those commonly used in the authentic products, since there is no evidence of imports of Oriental threads to Italy. By contrast, western and Cypriot threads traveled to the Middle East and Asia Minor, regions under Muslim rule, and thus crossed cultural boundaries. Since they were identified according to their origin, it is rather unlikely that their producers adopted Oriental specifications to insure their sale in these regions. In short, there is good reason to believe that these threads entered into various genuine “Tartar cloths” and other Oriental fabrics manufactured in Asian workshops.<sup>239</sup> Moreover, it is likely that they were sometimes blended with Oriental threads. Such eventualities would have blurred an important technical distinction between genuine Oriental silks and Italian imitations and, therefore, must be taken into account in any attempt to differentiate between them. On the other hand, it is clear that since metal threads were widely traded and used in numerous regions, the silks in which they are interwoven or with which they are embroidered do not offer decisive evidence regarding their provenance.

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Genoese Pera: *ibid.*, 36. This was also the case with Venetian gold thread, according to a Venetian trade manual completed in the 1320s at the latest: see A. Stussi, ed., *Zibaldone da Canal. Manoscritto mercantile del sec. XIV*, *Fonti per la storia di Venezia*, sec. 5, *Fondi vari* (Venice, 1967), 70.

<sup>235</sup> Molinier, “Inventaire du trésor du Saint Siège,” *BEC* 47 (1886): 654, no. 1289: *aurum cyprense*; 657, no. 1369: *aurum cyprense filatum*.

<sup>236</sup> For Paris: Douët-d’Arcq, “Tarif des marchandises,” 224, “la douzaine d’or de Chippe,” a reference to bobbins. For the dating, see above, p. 236. Silks embroidered with *auro de cipr’* are registered from 1371 onward among the pieces kept in the wardrobe of the English kings: see Monnas, “Silk Cloths,” 296; Cypriot gold thread was used in the weaving of others: see *ibid.*, 297–99, 302.

<sup>237</sup> Pegolotti, *La pratica della mercatura*, 58, 69, 91, 101: export of gold thread from Cyprus with conversion of Cypriot weight figures into those of these eastern Mediterranean localities.

<sup>238</sup> See G. Fagniez, *Études sur l’industrie et la classe industrielle à Paris au XIII<sup>e</sup> et au XIV<sup>e</sup> siècle* (Paris, 1877), 228 and n. 8.

<sup>239</sup> This possibility was already envisaged by L. Monnas, “The Cloth of Gold of the Pourpoint of the Blessed Charles de Blois: A *Pannus Tartaricus*?” *CIETA* 70 (1992): 122.

Silks topped the hierarchy of textiles. Luxury fabrics were a vital component of ceremonial occasions. Yet the considerable prestige with which silks were endowed extended far beyond court and ecclesiastical circles. Regardless of quality, all-silks or half-silks conferred distinction on their owners in all ranks of society. Pieces of clothing were particularly favored, since they allowed the conspicuous and mobile display of real or inflated social status in public. This was especially the case in an urban environment which, contrary to the rather secluded circle of the rulers' courts, promoted daily encounters between individuals belonging to various walks of life. As a result the silk market in the regions covered by this study was much broader and far more elastic than generally assumed. Silk consumption was already widespread in Muslim urban society by the eighth century, while in Byzantium and in the Christian West it rapidly expanded beyond the boundaries of the social élite from the early eleventh century onward. It is imperative, therefore, to gain an overview of the complex articulation of silk economics in these regions in order to evaluate its relation to artistic interaction.

Silk production and marketing were not exclusively élite-oriented and also catered to a large clientele at lower ranks of society. Even if manufactured for court consumption or in response to special commissions, luxury silks had a commercial value and were marketable products. This is implied by their occasional weaving in workshops other than court ateliers and the ability of those benefiting from grants to sell the silks they had received from rulers. Social and economic differentiation in consumption and variety in uses called for the production of a broad range of silk pieces of the same quality as well as for diversification, which included the downscaling of luxury products and the manufacturing of pieces in sizes appropriate to their projected utilization. The large volume of that variegated demand was primarily generated by social and economic incentives. It was satisfied by an extensive diffusion of silks insured by domestic, regional, and interregional trade.

Entrepreneurs and manufacturers not only responded to demand by the diversification of products or the downscaling of luxury silks. They also created and stimulated new demand and new fashion trends by borrowing visual and technical elements from foreign products that freely circulated within and across political and cultural boundaries. They acted aggressively in order to safeguard and enlarge existing outlets for their products or conquer new ones in the highly competitive silk market. The evolving nature of taste and fashion, combined with market conditions, determined to what extent entrepreneurs and manufacturers adhered exclusively to traditional indigenous weaves, ornamental elements, and color schemes, combined them with new features, or resorted to the imitation of foreign silks. Incidentally, these strategies were not mutually exclusive. Silks transferred as diplomatic gifts had only a limited impact in that respect. The very nature of these high-grade products restricted their circulation to the social élite and, like other luxury silks, only downscaled versions of them reached lower ranks of society.

Raw materials constituted the major portion of production costs in luxury products. As a result, the manufacturing of cheaper silks was mainly achieved by savings on these materials. Yet, in addition, lower pricing in response to the broad demand at all levels of quality could also be obtained by the manufacture of standardized products. Standardized ornamental patterns for figured silks also reduced payments to designers. The regulations

of the silk guilds in Italy provided standard measures and technical specifications to insure the renown and reliability of the silks manufactured by the members of these institutions.<sup>240</sup> Therefore, except for some luxury products and special commissions, most pieces must have been manufactured *en série*, like western woolens and cotton cloth from the twelfth century onward.<sup>241</sup> Despite the dearth of evidence in that respect, we may safely assume an identical economic rationale and a similar production pattern in Byzantium and in the Muslim world. This is implied, for instance, by the standard measures for bolts of woolens, camlets, and samites sold in Alexandria in the first half of the fourteenth century.<sup>242</sup>

Some inscribed silks displaying identifiable names of people, workshops, and locations can be more or less securely attributed to specific regions or manufacturing centers and can be approximately dated. Such is not the case with numerous other silks, especially figured ones, in view of the diffusion of ornamental and stylistic elements as an intercultural phenomenon. Since these elements often fail to provide solutions with respect to origin and approximate dating, ever more weight is being placed on the technical aspects of silks as reliable criteria enabling the solution of these problems. However, this reliance implies a rather static approach to silk manufacture and diffusion. It disregards the movement of raw materials and semi-finished products like textile and metal threads of different origins, which often traveled over long distances, as well as their possible blending in the course of the manufacturing process.<sup>243</sup> More important, it overlooks the transfer of goods, mainly in trading, the appropriation of foreign weaves and other technical elements, and the mobility of skilled labor, industrial implements, and technology, promoted by economic, institutional, and political factors or a combination of them. This mobility resulted in technological interaction between different manufacturing centers and cultural settings, parallel to the one generated by the same factors in the artistic field.

In sum, economics provide vital clues to the reconstruction of the avenues, nature, and range of artistic and technological interaction between silk manufacturing centers in Byzantium, the Muslim world, and the Christian West, as well as to cross-cultural interaction between these regions. Cross-fertilization blurred to varying degrees the traits of silks specific to one center or the other and contributed to the launching of new fashion trends. However, with respect to items of clothing one should distinguish between fabric, ornamental features, and cut. The adoption of one of these elements did not necessarily entail the assimilation of the others, and basic differences in clothing persisted between the three main regions covered by the present investigation.

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<sup>240</sup> See above, pp. 205–6, 230; L. Monnas, “Loom Widths and Selvedges Prescribed by Italian Silk Weaving Statutes 1265–1512: A Preliminary Investigation,” *CIETA* 66 (1988): 35–44.

<sup>241</sup> See Mazzaoui, *The Italian Cotton Industry*, 82–85.

<sup>242</sup> Pegolotti, *La pratica della mercatura*, 72.

<sup>243</sup> Around 1270 Montpellier imported raw silk from no less than eleven different regions of the eastern Mediterranean and beyond: see Jacoby, “A Venetian Manual of Commercial Practice,” 416–17. The complex trading patterns of gold threads have been discussed above.